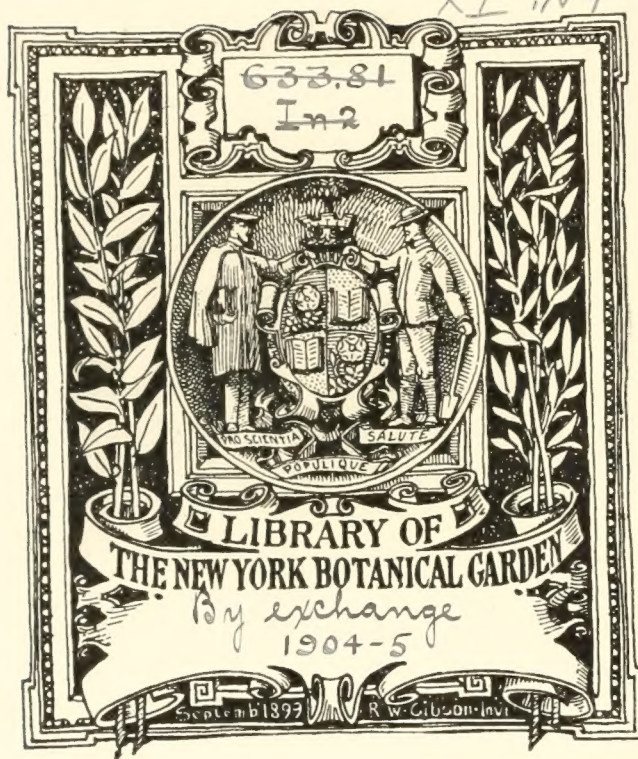






XI, N4





















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# INDIA RUBBER WORLD

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DICHOPSES GUTTA  
GUTTA-PERCHA

Edited by HENRY C. PEARSON—Offices, No. 150 Nassau Street, NEW YORK.

Vol. XXXI. No. 1.

OCTOBER 1, 1904.

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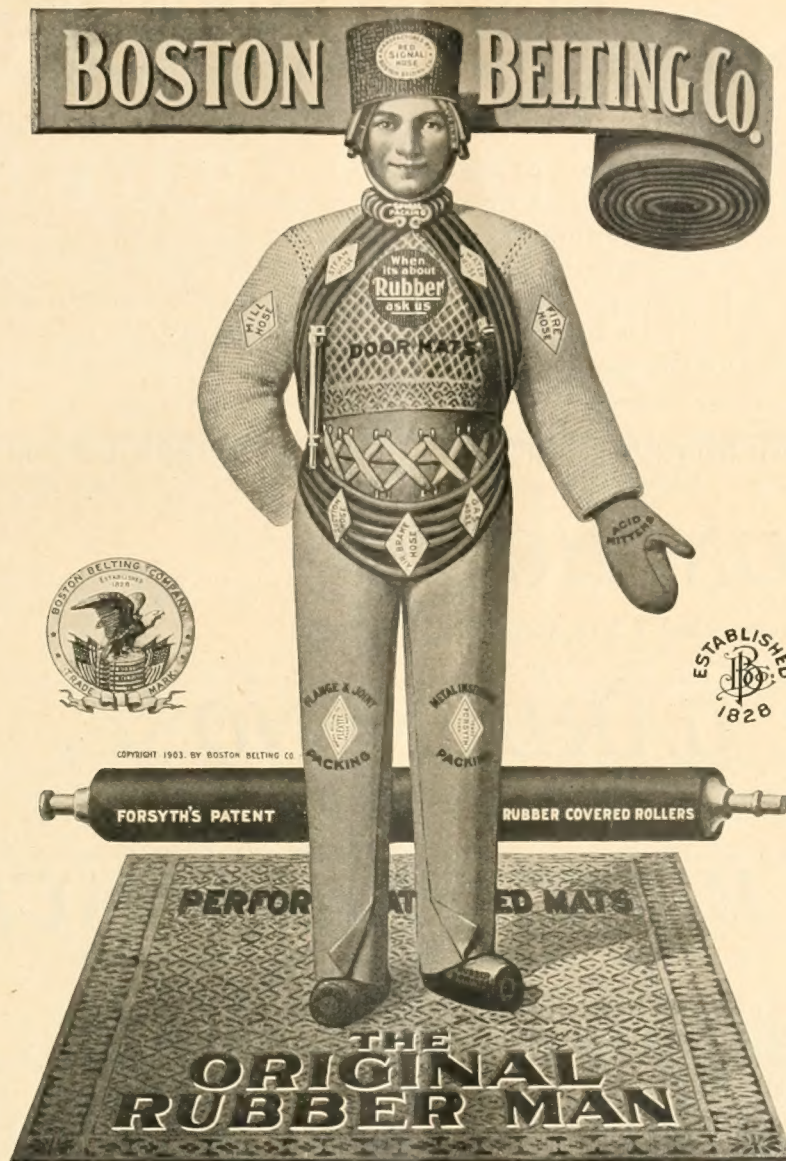
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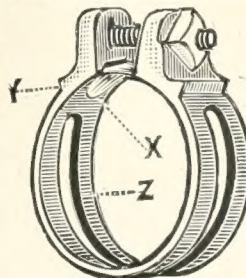
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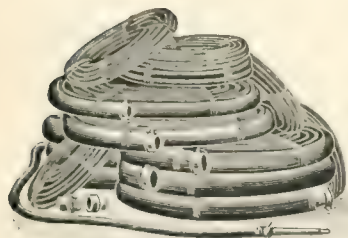
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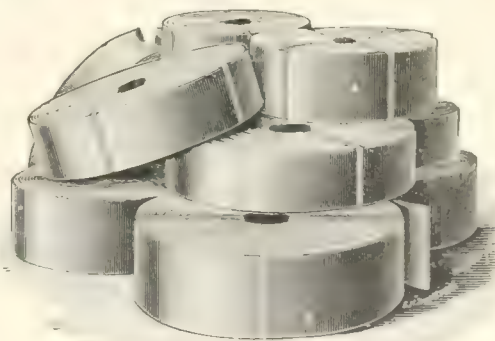
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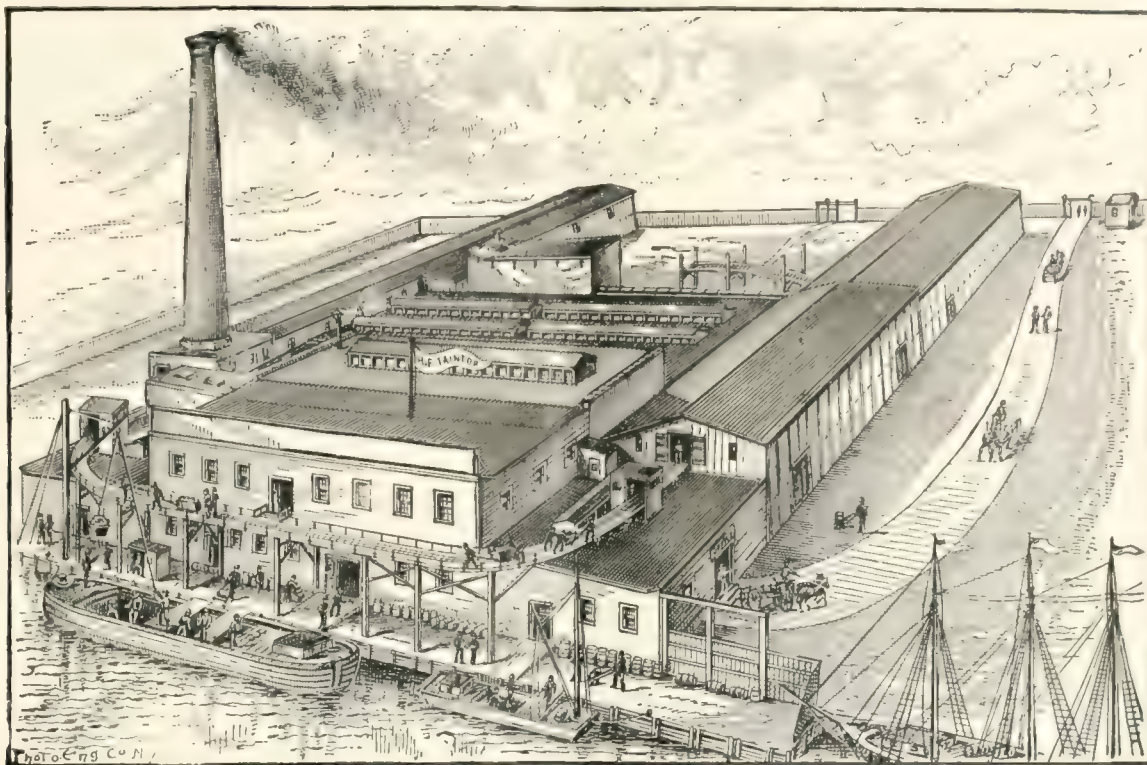
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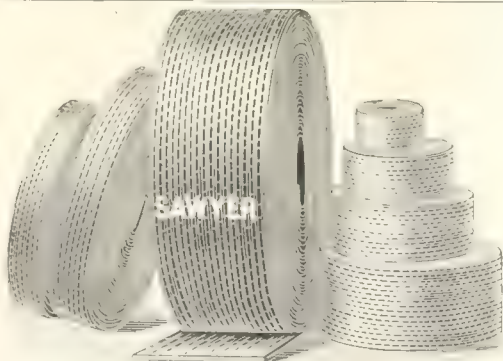
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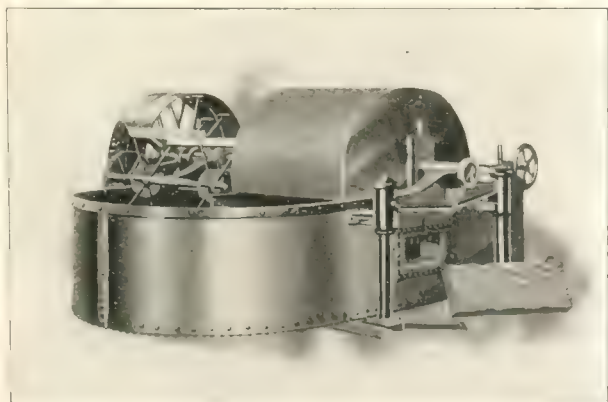
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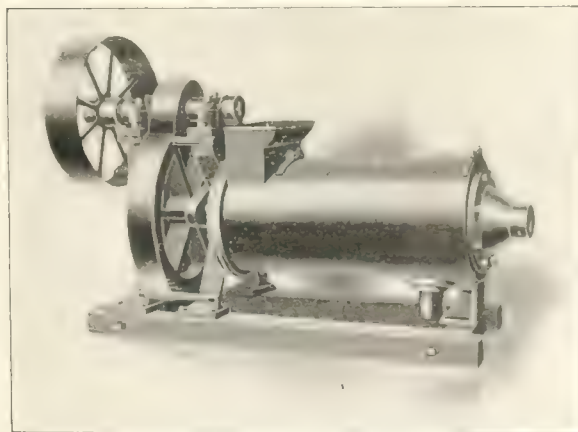
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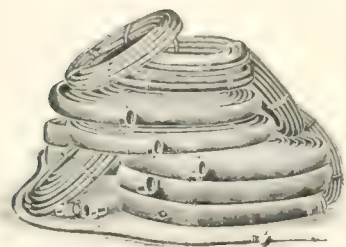
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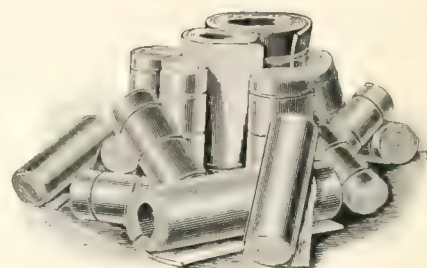
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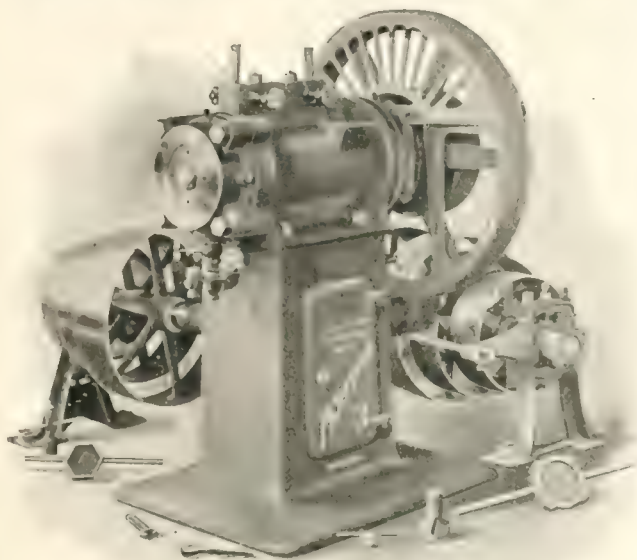
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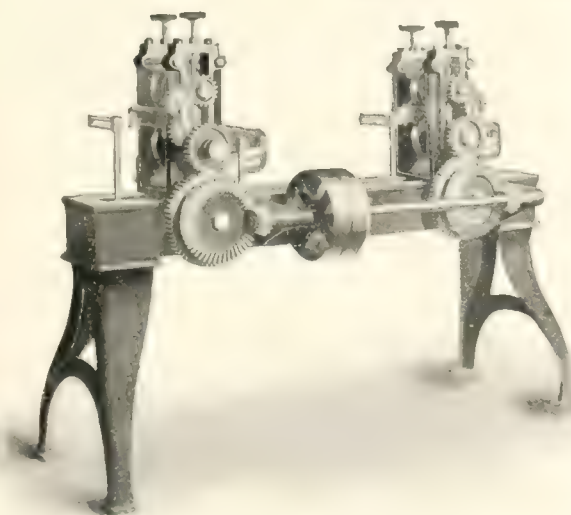
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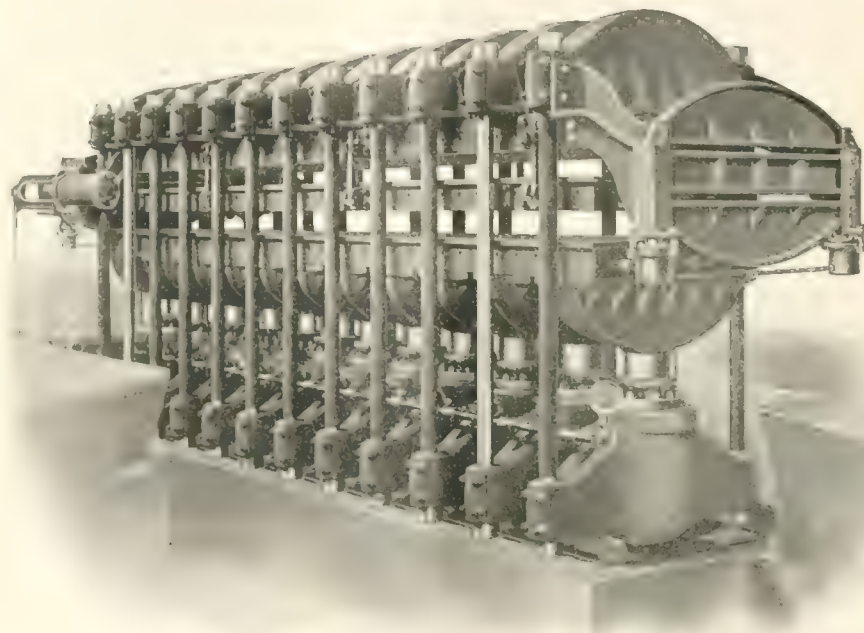
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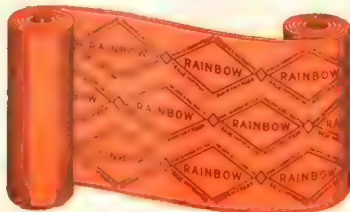
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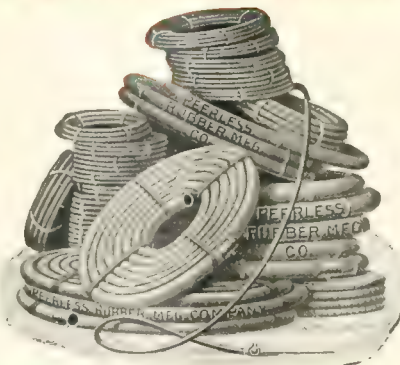
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## LOOKING FROM FACTORY TO FOREST.

ON another page appears a communication from a rubber manufacturer who, in detailing some difficulties he has met in treating Congo rubbers, no doubt is recounting the experience of other manufacturers as well. At any rate, we regard his letter as worthy of general interest, and give space to it with a view to inducing further investigation, and as a basis for discussion which may lead to practical results.

It is significant of the broadening of the field of rubber investigation when a manufacturer at Montreal expresses concern about the methods of treating rubber *latex* on the river Lopori. To Mr. Goodyear rubber was rubber—very much as tin is tin. He did, indeed, speak in his book of "three varieties" of rubber, "among which there is a marked difference, although it is not, in the present stage of the manufacture, sufficient to cause any great difference in the quality of the goods made from them." And it is safe to say that in the generation of rubber manufacturers and factory superintendents who followed Mr. Goodyear, able and successful as many of them proved to be, there were very few who realized the great variety of characteristics of rubber, or to what such differences were really due. If, in what we may call the haphazard factory practice of their time, less satisfactory results were obtained from one lot of rubber than from another, it was most likely attributed to any other cause but bad methods, in some cases, in the coagulation of the rubber.

Even yet Congo rubber, still comparatively new to manufacturers, is often spoken of as it were one definite material, instead of which it is a surprisingly varied class of rubbers. By way of illustration, we may mention that the 513 tons of Congo rubbers offered at the September inscription sale at Antwerp were catalogued under no less than 31 commercial designations. It is true that in many cases these were geographical terms, and that rubber of the same character might have been offered under different names. But that there were wide differences in quality is indicated in another way. The rubber was catalogued under 81 lot numbers, with prices marked by the official broker, in advance of the sale, to show his estimation of the values, based upon the last public sales of similar rubber. Thirty-five different prices were marked, ranging from 3 francs to 11.45 francs per kilogram—*i. e.*, from 26½ cents to \$1 per pound. Evidently, then, the designation "Congo rubber" covers a wider range of materials than can be expressed by "good, bad, and indifferent."

It remains to be considered whether the wide variations in Congo rubbers are legitimate, or unpreventable. In an article which we published just two years ago Monsieur van den Kerckhove, a Belgian expert, insisted upon the word *condition*, and not *quality*, in speaking of the apparent deterioration of certain Congo rubber sorts, and he did not hesitate to assert that "the greater part of the lots emanating from the Congo region are more or less tainted." In other words, the rubber suffered either from improper preparation, or in careless handling in transit, with the result that unnecessarily low prices were realized.



M. van den Kerckhove, who has lately returned from Africa, favors THE INDIA RUBBER WORLD this month with a report on the methods of rubber coagulation employed in the Congo region, from which it is plain that the character of the product must be sensibly affected by the process employed, as well as by proper care or the lack of it. The Congo rubbers are derived from several different trees and vines, with different inherent qualities, and not all susceptible to the same treatment. In the evolution of an article of rubber manufacture, therefore, the employment of right processes is no less essential in the African forest than in the factory at Montreal. And we believe that the next important development in connection with rubber will be in the preparation of the raw material—a work which will be greatly stimulated by the experiments now under way on plantations in Ceylon and elsewhere, which afford so much greater facilities for scientific study than any rubber camps now existent in tropical forests.

Meanwhile there is a profitable field for study in the factory laboratory, in comparing the behavior of rubber of differing conditions, as well as rubbers of different natural quality, under the same treatment, both for the present good of the manufacturer, and in order that the scientific culturist—and, later, the intelligent supervisor of forest rubber extraction—may be guided in producing just the grades of rubber required.

#### A "TIMOROUS" ASSOCIATION.

WRITING of the India-rubber Manufacturers' Association of Great Britain, *The India-Rubber Journal* remarks: "The Association has splendid work before it, but this we are afraid it will never accomplish until it has freed itself from the somewhat timorous spirit which seems to afflict its actions."

What is the matter with the Association? Our contemporary's indictment charges it with failing to recommend an advance in the selling prices of rubber goods "when ever necessary," or, when such recommendation is made, with not inflicting penalties on "any small minority of its members" who may fail to respect it. In regard to the present situation the *Journal* remarks: "This delay on the part of the Association in recommending an increase has further aggravated the state of affairs in the rubber trade, for most of the trade outside of the Association were waiting for them to move before following their example."

But before making these assertions it happens that our contemporary, in the same article, feels called upon to state that "it has also been shown that the manufacturer who is last to increase the price of his manufactured rubber goods always does extra trade," and we infer from the context that every individual manufacturer must be the judge for himself whether this extra trade is likely to prove profitable or otherwise.

The same conditions obtain in England as elsewhere: Everybody in a given trade may feel that prices of goods are too low to yield adequate profits and ought to be advanced, but each manufacturer hesitates to make the first

move, lest some of his customers be driven away, to be captured by a competitor who adheres to the old price scale. And if, in spite of the manifold difficulties involved, a general agreement among competitors to advance prices should be reached, it is absolutely impossible for concerns of varying financial strength, and doing business under widely varying conditions, to long adhere strictly to the terms of the agreement. Suppose that "penalties" be inflicted upon the price cutters—that does not cover the whole ground. Who shall compensate a manufacturer, not financially strong, whose loss of trade by adhering to a rigid price agreement brings him to bankruptcy? This is the crucial test of every price agreement that ever was made.

But isn't it a little hard on the India-Rubber Manufacturers' Association to tax it with not working for the benefit of the outside competitors with its members? If they want prices advanced, and don't feel able to do it alone, it is open to them to join the Association, which then doubtless would feel in a stronger position, and more disposed to act. As matters stand, however, for the Association members to take the initiative in raising prices, with no obligation imposed on the outsiders, would be to create the situation known in the United States as "holding the umbrella over the other fellow;" the outsider would be able to do more trade, perhaps at better rates, while incurring no risk and none of the unpopularity that comes from putting up the prices of goods.

#### AN ENCYCLOPEDIA ARTICLE ON RUBBER.

IT is doubtful whether very many persons will buy the seventeen sumptuous volumes comprised in "The New International Encyclopedia" (New York: Dodd, Mead & Co., 1904) on account of its article on "Rubber," to which 2 pages are devoted, as against 7 pages to butterflies,  $2\frac{1}{2}$  to sharks, 8 to silk, 5 to shorthand, and 3 to "Unemployment." Yet these two pages will not fail to interest such persons as may desire to refresh their memories in regard to what they don't know about rubber. First, the derivation of the title word is interesting—thus:

Rubber (from *rub*; perhaps connected Gael. *rub*, Welsh *rhubio*, to rub; Ir. *rubur*, Gael. *rubhar*, a rubber), INDIA RUBBER or CAOUTCHOUC.

Now you know how this important article of commerce got its name. Rubber is referred to as being obtained from several species of trees, but no mention is made of rubber vines. These trees, it seems, are tapped, with the result that a peculiar sap flows out into small cups placed in position for the purpose. The material thus accumulated in these cups is emptied daily into a large vessel, in which it is allowed to smolder over a slow fire until the water is evaporated and the rubber shaped into cakes is ready for export.

This should prove interesting on the Amazon, particularly. Next attention is given to the subject of Vulcanization, of which we read:

Its effect is to render rubber elastic, impervious, and unchangeable in texture under all ordinary conditions.

In regard to the commercial use of rubber, it appears that—

In 1852 a Boston sea captain imported into America 500 pairs of rubber boots which had been made by the natives of Brazil. These were readily sold for from \$3 to \$5 per pair, and a great demand for them

was created. During the next 15 years more than 1,000,000 pairs were sold.

It is not stated whether the use of rubber boots came to an end in 1867. Charles Goodyear is credited with important work in connection with rubber, through adopting Leudersdorf's discovery and acquiring the patent of Nathaniel Hayward, but the date of Goodyear's activity is not given. In England, Charles Macintosh (spelled in this book McIntosh) brought out a waterproof garment which is still known by his name. We learn that rubber is always plentiful, and that new sources of supply are frequently discovered. There has been a steady increase in the value of rubber imported into the United States, due in part to "the rise in price, which in 1900 was 63 cents per pound."

And this in a book printed in the summer of 1904! It is all very readable, but we cannot help thinking that the editors of the new encyclopedia might have saved themselves some labor by omitting the preparation of a special article on "Rubber." Their readers would have been benefited quite as much had they reproduced the account of rubber making given in Mr. Rodolphe Wyss's delectable romance, "The Swiss Family Robinson," the scene of which is laid in a desert island about 1800.

THE RUBBER INDUSTRY IN MASSACHUSETTS, having been long established, and become extensive and well organized, may well be taken as a criterion of the industry of the whole country, in any study of general conditions. On another page of this issue appears a tabulated comparison, for four years, of details reported in confidence, to a state office, from 47 factories—believed to comprise 80 per cent. of the rubber goods production in the state—from which it appears that a steady increase has been made in the value of products, as well as in the value of stock used, the number of wage earners employed, and in the amount of wages paid. If these identical conditions should prove true of the industry outside of Massachusetts, it would be a most satisfactory state of affairs, and we know of no reason for supposing that the rubber manufacturers elsewhere have been less successful. Certainly the steadily increasing imports of crude rubber into the United States indicate a corresponding increase in consumption, which has not all been confined to Massachusetts.

BOOTS AND SHOES FORM ONE ITEM of rubber goods production concerning which it is easier to obtain definite information from published official statistics than in regard to most other wares into which rubber enters. Without doubt footwear of this description is all the while coming into the wider use, but in the case of each of the European countries producing such goods the tendency is towards the supplying of the home demand by home factories. Some figures which we print this month indicate a gradual decline of imports of rubber footwear into Great Britain, and an increase in exports. Last month we presented some statistics of a similar nature relating to Austria-Hungary, and a like showing would be made by France and Germany. Our British correspondent this month also contributes a suggestion on the general subject. The one conclusion to be made is that the future of the export trade in rubber footwear of any country must depend upon the cultivation of a demand in non manufacturing countries, and in this connection it is of interest to note that Great Britain's exports of such goods to her own colonies increased from 46,340 dozen pairs in 1901 to 106,560 dozen pairs two years later. And last month we showed that Austria-Hungary's exports of rubber shoes to Turkey had increased nine fold during three years,

and to British India nearly three fold. Hong Kong took more than a half million pairs of British made rubber shoes last year, which more than three times the amount taken in 1901. Some of these increases, of course, have been at the expense of other exporting countries, but the facts stated all have a bearing upon the prospective importance of comparatively new markets for rubber shoes. In a broader sense, they relate to conditions which may have to be considered in connection with the rubber trade as a whole—the growing independence of each manufacturing country of foreign goods, and the necessity of seeking outlets for export in countries not provided with rubber factories.

### EXPERIMENTS WITH CONGO RUBBER.

TO THE EDITOR OF THE INDIA RUBBER WORLD: A friend of mine in the rubber business asked me to help solve a difficulty he had in curing some white goods in a mold; sometimes he would have no trouble whatever, and then without any apparent reason the goods would come out undercured.

We went over all the compounds; our first suspicions were directed towards the lime, but we found no trouble apparent there; afterwards we looked at the rubber, which was Lopori; the piece I saw was cut from a roll which has been ground down on the mill.

I believe the trouble was eliminated by changing the compound a little, but the point which interested me (and I have no doubt will interest you, inasmuch as I know many of your readers have had the same trouble) was that the trouble had occurred without any apparent reason; the compounds had not been changed, and as far as we could possibly determine no mistake had been made.

Since then I have come to the conclusion that the trouble was with the crude rubber; my conclusions are drawn from the following experiments:

First. I took some high grade Lopori, carefully selecting it, avoiding any of the gum which showed signs of having sweated. After mixing it with the compounds I cured it, and found the results quite satisfactory.

Second. I took some of the same lot of Lopori, including some of the sweated gum, treated it exactly the same; the results were not nearly as satisfactory. The binding of the mass was not good, and when stretched it broke short, whereas the first experiment did not.

Third. I took some gum which was sweated throughout (from the same lot); with the same treatment it showed a complete failure. It was not cured. It had turned a dirty color. I gave it a further curing—in fact I burnt it—but there were no signs of a correct or complete cure.

To me this was very interesting, as showing that sweated gum must not be used for this purpose—that you cannot judge gum after it has been ground on a mill.

I find further that a sweated rubber may be washed, dried, etc., and, after being ground, it will present a very good appearance, but after laying it aside for a month or two I find that a steady decomposition has taken place. It is not at once apparent. It still feels hard and looks all right, but test its elasticity and its deterioration is quite apparent.

Will you tell me, Mr. Editor, why the gathering of crude rubber on the Congo is not carried out in somewhat the same way as on the Amazon? It would seem that if a good red Upper Congo milk is cured in the same way as Pará, better results would be obtained. Yours truly,

A. D. THORNTON,

General Superintendent, The Canadian Rubber Co. of Montreal.  
Montreal, Canada September, 19, 1904.



**RUBBER, GUTTA-PERCHA, AND BALATA.** BY FRANZ CLOUTH, CO-  
 AUTHOR OF "THE TECHNOLOGY OF RUBBER." With Additions and Emendations by the  
 AUTHOR. Macmillan & Sons, New York; D. Van Nostrand Co.,  
 New York. Price \$

LIANES CAOUTCHOUIFIÈRES DE L'ÉTAT INDÉPENDANT DU  
Congo. — Par Dr W. P. van der Grinten et L. Gentil. — Bruxelles: 1954. Cloth.  
Illustrations: Planches 21-22. 2 plates map. Price, 25 francs.]

The present work is devoted to nearly a score of *latex* yielding *lianes* (creepers, or vines), from which are derived the

UEBER HERKOMMEN UND CHEMIE DES KAUTSCHUKS. VON DR.  
Ed. Marckwald und Dr. Fritz Frank. Dresden: Steinkopff & Springer,  
1904. [Paper. 8vo. Pp. 68. Price, 1.50 marks.]

IDENTIFICATION OF GUTTA-PERCHA AND ALLIED GUMS BY Means of Their Resins. By Wilton G. Berry. Reprinted from the *Journal* of the Society of Chemical Industry, New York Section, May 31, 1904. London: 1904. [16 mo. Pp. 8.]

IN CURRENT PUBLICATIONS.

*Ficus Caoutchoucifères du Congo.* By Émil De Wildman—*Revue des Cultures Coloniales*, Paris. XIV-149 (May 20, 1904). Pp. 293-294.



## RUBBER COAGULATING METHODS IN CENTRAL AFRICA.

By Gustave van den Kerckhove (Brussels).

OF all rubber producing countries the Congo Free State without doubt offers the greatest variety in the way of coagulating *latex*. How many native systems are employed for coagulating the *latex* of the *Landolphia* vine, for instance, it would be hard to say, though at least six or seven general methods are in use. But every tribe, even every man of a tribe, has his own ideas about the preparation of rubber. This is the reason why every parcel and even every piece of a parcel of Congo rubber shows some difference from every other piece and parcel. For example, take a parcel of a few tons of white rubber ball ("Equateur"), and of the 50,000 to 60,000 pieces (mostly balls) of that parcel, no two are alike; some are small, some large, others adulterated, and so on. They show the character of the men who have prepared them, and a keen observer could even estimate approximately the age of the men by the size of the pieces. I do not believe that civilization in Central Africa has improved the quality of rubber, except in checking adulteration. It is well known that a savage negro from the interior may make better rubber than the coast native who has been "in touch with civilization," and this is not only so in the Congo, but in every African rubber producing district.

Of the different methods of coagulation which I shall now endeavor to describe, only one has been suggested or discovered by the white man. Not only is there a great variety in the way the native coagulates the *latex*, but in the different forms he gives to the rubber, viz.: Balls, cakes, slabs, bracelets, strips, cubes (thimbles), and so on. This, of course, is merely a question of fancy. Most of the Congo rubber is taken from the *Landolphia* vine, and the first method of curing the rubber—here mentioned because it is the oldest—is that known among the natives as the calabash system.

The native collects the milk in a calabash, in which a hole has been made at the bottom, some water being mixed with the *latex*. After 12 to 20 hours of rest, the *latex*, which has already reached a state of consistency, floats, and the water is poured out by opening the hole. The *latex* alone remains now in the calabash for a certain time, and is given whatever size or form the native fancies, when it is left to dry naturally, or sometimes

is slightly smoked. This method, in vogue among the natives of the Aruwimi, Itimbiri, Mongala, Kasai, and Kwilu districts, is fairly good, though the rubber has a tendency to ferment.

In some regions farther north the method employed is still more primitive. The *latex* is collected with a leaf and poured into any sort of receptacle—calabash, wooden jar, or iron pot—and is left to coagulate naturally, with the result that most of the rubber collected in this way is fermented, and even rotten. It is singular that such curing gives rubber of good elastic qualities, but the smell of the stuff is simply horrible.

The Kasai district natives use two different methods. For

instance, after the vine has been tapped they cover their bodies with the *latex* and return home. The water contained in the *latex* having by that time evaporated, the *latex*, which has then the appearance of rubber, is taken off and turned by hand into balls or twists. This method is also used by other natives of the upper Congo. Here is another method of the Kasai natives: The vine is bled and the next morning the *latex*, having become slightly coagulated in the open air along the branch of the vine, they take the rubber, winding it round their fingers or a small stick, making twists of ten balls per twist. This rubber, known under the name of "prime red Kasai," is one of the best African grades. The "prime black Kasai" is obtained by the boiling and smoking process, of which I shall say a few words further.

Now I come to a most important question about curing the *latex* of *Landolphia*—the process of coagulation with the Bosanga juice. The *Costus afer* (the "Bosanga" plant) has more the appearance of a reed than a tree. The coagu-



TAPPING "LANDOLPHIA" VINES.

lating properties of its juice were discovered a few years ago in the Lopori district, and this method gives wonderful results, although it is very simple. A small percentage of Bosanga juice is mixed with the *latex* and, with his finger or a stick, the man stirs the liquid, the coagulation taking place almost instantly. After this, the *latex*, which now is a thick mass, is shaped into balls and left to dry in the shade or stored in a bungalow. It takes as a rule six to eight weeks for the rubber to dry enough for shipment to Europe. I think it most important to mention that the Bosanga juice coagulates *latex*





RUBBER GATHERERS IN CAMP.



EQUATEUR RUBBER GATHERERS AT HOME.

from vines only, and not from trees. Most of the Congo white rubbers are coagulated by this method. The Lopori grades, so well known among American manufacturers, are thus prepared, and also the Bussira, Lulonga, Ikelemba, Maringa, and some Mongala kinds. The official gardens at Eala (Equateur district) supply seeds of the Bosanga plant, which is also known by the natives as Bokako.

There has again been much talk lately about the "*Caoutchouc des herbes*," or root rubber, largely obtained from *Landolphia Thollonii*, and known to commerce as "thimbles." I shall not dwell at length on the peculiar characteristics of this plant, which has been described in THE INDIA RUBBER WORLD [See May 1, 1903—page 261]. The natives of the Kwango district, and also around Stanley Pool, where the *Landolphia Thollonii* is so plentiful, tear up the roots, and, after having cut them into pieces of about seven or eight inches, expose them under the sun, and afterwards plunge them into water. The whole is then beaten with sticks to separate the bark from the latex. After this operation has been repeated

several times, the mass still containing water and bark is boiled. After being dried it is shaped into large sheets, about  $\frac{1}{2}$  inch thick and these sheets or cakes, when dried still more are cut into small cubes, which take the name of "thimbles" on the European and American markets. These thimbles contain as a rule about 30 to 50 per cent. of bark. Many patented tools

or apparatus are offered for the extraction of the latex from the "*Caoutchouc des herbes*," but I am inclined to think that the native system is the best thus far put in operation.

Thus far most of the *Landolphia* vine latex of the district has been cured with the Bosanga juice, but lately some experiments have been undertaken in the Ikelemba region with a method similar to that of curing the *Hevea* rubber in Ceylon, this being the method previously referred to as having been introduced by white men. This system, which might be called the straining, pressing, and extra drying cure, has given rather good results, but in my opinion, it is likely to be adopted in methodical rubber plantations.

In some parts of the Congo, especially in the Kasai region, every piece of rubber is slightly smoked. Some tribes of the same region used to coagulate the latex with human urine.

In the way of curing rubber the native has certainly observed many things. I shall not attempt to settle the question whether he has himself discovered that smoke, on account of its anti-septic properties (creosote), tends to prevent oxidation, or that certain salts help the coagulation. It is quite true that their methods are primitive, but it is most astonishing to observe that with all his knowledge, his up-to-date tools, his use of chemistry, the white man has failed to prepare such good rubber here as the almost savage negroes of Central Africa. I have found this to be the case everywhere I have traveled in



RUBBER MADE INTO CAKES AFTER BOILING.



RUBBER DRYING IN THE AIR.



Africa. I suppose the white man has not yet acquired what I shall call in French the *tour de main*.

Brussels, August 27, 1904.

\* \* \*

#### THE "BOSANGA" PLANT. COAGULATION OF "ROOT RUBBER."

THE above paper may appropriately be supplemented by some extracts from a new work by MM. De Wildman and Gentil ("Lianes Caoutchoutifères de l'État Indépendant du Congo." Brussels: 1904), a translation of which follows:

"The acid sap which the natives use for coagulating the rubber is furnished by a native plant, very common throughout the whole Congo territory, under the name of 'Bosanga,' 'Bosasanga,' or 'Bokako'; this sap possesses the acidity of sorrel. The 'Bosanga' is a plant attaining a maximum height of 1½ to 2 meters; its leaves are not attached to the stem opposite one another, but they run spirally around it. The fruit does not grow at the foot of the plant, as is still quite often stated, but at the crown; it is not long and red, but fleshy globular and greenish in color, and ripens from flowers which are always placed at the tip of the branches and which are of a beautiful pinkish white hue. This plant, the scientific name of which is *Costus Lucanusianus*,\* must not be confounded with another plant to which it bears some resemblance, which belongs to the genus *Anomum*, which does not have a sap possessing the quality of inducing coagulation.

"The natives use the following method for coagulating India-rubber with the 'Bosanga': While one man cuts off the 'Bosanga' stalks, from which he removes the leaves, another holds a number of blades taken from the leaves of the banana tree over the fire, which makes them remarkably flexible. Then a small excavation is dug in the soil. In this the banana leaf is placed, and the *latex* poured into it. Three or four stalks of *Costus* are held together and twisted over the hole containing the *latex*, which, under the action of the acid sap, immediately coagulates. The native now, with his hands, molds the coagulated mass into a ball and then presses it firmly, this operation being repeated until all the watery content of the *latex* has been forced out.

\* This is not the same designation as given by M. van den Kerkhove, who gives the name *Costus aler* to the plant he has sketched for THE INDIA RUBBER WORLD, as illustrated on this page. There are, however, many different species of *Costus* in tropical Africa, and doubtless the juice of more than one of them is used in coagulating rubber. — THE EDITOR.

"In order to obtain the sap from the *Costus*, the native sometimes use a different process; he splits the stalk open and passes it between one of his fingers and the blade of his knife, allowing the sap of the plant to run into a receptacle, where it only needs to be slightly purified before it may be used for the coagulation of a correspondingly great quantity of *latex*.

"As we have stated above, the sap of the *Costus Lucanusianus* does not in any way act upon the latex of the *Clitandra*

*Arnoldiana* [a "root rubber" plant]. The natives use two different methods for coagulating the latter:

"1. By boiling the *latex*.

"2. By pouring the *latex* into boiling water.

"In using the first named process, the natives simply boil the *latex*, whereupon it begins to coagulate as soon as ebullition takes place; this method, however, is generally inadvisable, as the coagulated mass retains in its meshes a quantity of serum which is often



*Costus aler* Bosanga

considerable in quantity, the albuminous parts of which may after a time make the rubber pitchy or sticky.

"In using the second of these methods, the Congo natives boil water and pour the *latex* which they have gathered into it, and it instantaneously coagulates. The first process gives an inferior quality of *latex*, sometime sticky; the second fur-

nishes that beautiful black gum so much appreciated in commerce.

"After having obtained the coagulated mass by the second method, the natives cool the rubber by plunging it into cold water, afterwards strongly pressing the balls with their hands or feet between two leaves, in order to remove together with the water and the excess of serum, that portion of the *latex* which may not have coagulated."

THE Pennsylvania Rubber Co. (Jeannette, Pa.) have been awarded the contract for flooring the main rooms of the new Carnegie Library, at Pittsburgh, with their interlocking rubber tiling, of which 105,000 square feet will be required.



FOREST OF "LANDOLPHIA" VINES.



CARRYING RUBBER TO MARKET.



## INDIA-RUBBER GOODS IN COMMERCE.

## EXPORTS FROM THE UNITED STATES.

OFFICIAL statement of values of exports of manufactures of India-rubber and Gutta-percha, for the month of July, 1904, and for the first seven months of five calendar years:

MONTHS.	Belting, Packing, and Hose.	Boots and Shoes.	All other Rubber.	TOTAL.
July, 1904. ....	\$ 74,427	\$113,652	\$ 178,449	\$ 366,528
January-June ....	430,239	358,176	1,204,133	1,992,848
Total. ....	\$504,666	\$472,128	\$1,382,582	\$2,359,376
Total, 1903. ....	474,684	341,792	1,459,954	2,276,430
Total, 1902. ....	386,105	355,002	1,116,558	1,857,755
Total, 1901. ....	351,644	291,356	1,073,822	1,716,822
Total, 1900. ....	317,726	251,525	861,627	1,430,878

## SEVEN MONTHS FOR LAST TWO YEARS COMARED.

Gain in belting, packing, and hose. ....	\$ 29,982	
Gain in boots and shoes. ....	130,336	\$160,318
Loss in "All other rubber" .....		77,372
Net gain in seven months of 1904. ....		\$ 82,946

## DOMINION OF CANADA.

THE figures which follow are derived from the unrevised monthly official statements for the fiscal year ended June 30, 1904. Comparative figures for preceding years are not given, for the reason that the latest figures are subject to revision, but former statistics may be found in THE INDIA RUBBER WORLD of January 1, 1904 (page 128). The first table relates to "Imports entered for consumption" of manufactures of India-rubber and Gutta-percha, and indicates a falling off from 1902-03:

IMPORTS.	United States.	Great Britain.	Other Countries.	Total Value.
Boots and shoes. ....	\$141,281	\$ 341	\$ 73	\$141,695
Belting. ....	49,618	1,076	....	50,694
Clothing and water-proof cloth. ....	44,808	314,585	1,453	360,846
Hose. ....	47,404	919	117	48,440
Packing and mats. ....	49,395	1,392	67	50,854
All other. ....	274,250	43,353	24,030	341,633
Total .. ..	\$606,756	\$361,666	\$25,740	\$994,162

Exports of Canadian rubber manufactures show a slight decline as compared with the preceding year, and the smallest figures since 1897-98. The distribution of rubber exports for 1903-04 was:

To Great Britain. ....	\$39,378
" United States. ....	9,994
" Australia. ....	31,583
" Other countries. ....	47,112
	\$128,067

## RAW MATERIALS.

THE returns embrace these details relating to crude India-rubber and allied details. Of the items mentioned, other than India-rubber and Gutta-percha, no matter how described, doubtless the greater part is reclaimed rubber, produced in the United States. The amount of India-rubber proper is greater than in any previous year, indicating a greater production of goods for home consumption:

CLASSIFICATION.	Pounds.	Value.
Gutta-percha. ....	85	\$ 110
India-rubber. ....	3,213,277	2,177,712
Rubber, recovered; rubber substitute, and hard rubber in sheets. ....	2,133,437	277,770
Rubber powdered and rubber waste. ....	406,489	36,570
Total, 1903-04. ....	5,753,288	\$2,512,168
Total, 1902-03. ....	5,404,124	1,820,544
Total, 1901-02. ....	4,792,088	1,653,704

## GREAT BRITAIN AND IRELAND.

THE foreign trade of the United Kingdom in manufactures of India-rubber for the past five years, as shown by the official returns, has remained practically at a standstill, as will appear from this comparison of values—the figures not embracing waterproofed apparel:

	1899.	1900.	1901.	1902.	1903.
Exports. .	£1,388,805	£1,423,464	£1,262,415	£1,224,444	£1,426,267
Imports. .	691,805	712,081	689,227	779,373	677,743
ReExports. .	27,166	45,503	26,828	33,764	40,877

Formerly exports and imports of rubber goods were not classified, but it is now possible to make the following showing of values, classified under two headings, for the last three years:

	1901.	1902.	1903.
Exports:			
Boots and shoes. ....	£ 176,387	£ 171,557	£ 224,586
Other sorts. ....	1,086,028	1,052,887	1,201,681

	1901.	1902.	1903.
Imports:			
Boots and shoes. ....	£246,221	£288,832	£158,411
Other sorts. ....	443,006	490,541	519,332

The statistics which follow relate to the division of British exports of rubber goods between foreign countries and British possessions, the figures indicating values:

	1901.	1902.	1903.
Foreign:			
Boots and shoes. ....	£120,430	£104,755	£109,154
Other sorts. ....	766,228	780,595	904,757
British Possessions:			
Boots and shoes. ....	55,957	66,802	115,432
Other sorts. ....	319,800	272,292	296,924
Total. ....	£1,262,415	£1,224,444	£1,426,267

The fluctuations in the value of rubber goods exports of all kinds to the various countries are illustrated by the following table, dealing with seven countries which figure prominently in the list:

	1899.	1901.	1903.
France. ....	£267,531	£248,739	£263,887
Germany. ....	205,934	118,023	150,986
Belgium. ....	130,011	115,925	106,716
Holland. ....	74,688	45,167	76,477
United States. ....	48,966	50,840	62,000
Argentina. ....	23,438	15,438	24,684
Italy. ....	25,994	10,363	22,566

## BRITISH FOREIGN TRADE IN RUBBER FOOTWEAR.

THE figures which follow relate to the imports and exports of rubber boots and shoes for three years in quantities—i.e., dozen pairs:

IMPORTS.			EXPORTS.		
1901.	1902.	1903.	1901.	1902.	1903.
151,806	144,365	62,216	United States. ....	....	....
57,946	49,451	53,700	Germany. ....	7,163	9,255
1,124	3,366	7,354	Holland. ....	5,611	5,082
657	26	3,726	Belgium. ....	15,829	18,684
10,344	10,701	3,604	France. ....	26,026	24,177
....	....	....	Norway. ....	7,671	7,046
....	....	....	Turkey. ....	14,803	10,594
....	....	....	China. ....	9,243	5,505
70	141	6	Other Foreign. ....	5,398	3,452
7,244	12,045	4,748	Canada. ....	46,340	59,833
....	....	....	Other Colonies. ....	....	106,360
220,191	220,095	135,354	Total. ....	138,084	143,628
				143,628	198,030

## FOOTWEAR EXPORTS TO BRITISH COLONIES.

[In Dozen Pairs.]

	1901.	1902.	1903.
Cape of Good Hope. ....	3,657	5,866	7,130
Natal. ....	5,059	8,615	9,332
British East Indies. ....	6,281	7,462	17,807
Hong Kong. ....	13,705	14,420	45,802
Australia. ....	9,605	15,362	18,866
New Zealand. ....	2,215	5,059	2,765
British Guiana. ....	3,528	1,565	3,207
Other British Possessions. ....	2,290	1,484	1,391
Total. ....	46,340	59,833	106,360

## THE INDIA-RUBBER TRADE IN GREAT BRITAIN.

*By Our Regular Correspondent.*

IT would be harping on a worn string to say that universal grumbling exists about the high price of rubber and the uncertainty regarding its position from week to week; almost, one might say, from day to day. It is still the general thing to be told that the acuteness of the situation is

## STATE OF TRADE.

entirely due to the wicked Liverpool merchants, but those who loudly proclaim such opinions do not bring forward anything substantial in the way of proofs. No doubt those who can control themselves so as to make a judicial survey of the situation will be forced to the opinion that after all it is merely an ordinary case of supply and demand, and must perforce be put up with. However, despite the price of rubber, it is in no way the fact that the manufacture is paralyzed. Dullness is certainly reported, but at any rate as far as the north of England is concerned, this must be largely attributed to the short time in the cotton mills and to the depression in the engineering industry. There are no signs of material improvement in either of these in the near future, so the mechanical rubber trade in these markets is likely to remain quiet. In one respect the present price of rubber is playing an important part, and that is where it is customary at this season of the year to make special articles to stock for next season's demand. In certain cases, the details of which I do not consider it advisable to enter into, passivity instead of activity is ruling in marked contrast to what has been the general rule. It is a pretty safe assumption that the diminished profits on an increased turnover as shown in the report of the Leyland and Birmingham Rubber Co. [Given on another page of this paper.—THE EDITOR.] would be reflected in the balance sheets of other concerns both of greater and less magnitude if the accounts became public property, though it may be mentioned that there is considerable disparity between the methods adopted by different firms to increase their turnover. In some cases it is clear that little or no profit can accrue from transactions which bear a *prima facie* indication of good business. Looking at the situation broadly, it seems clear that a rise in the price of raw rubber affects the industry much less than would a similar contingency in other industries which come to mind. The principal users of rubber, among whom may be mentioned the railway and steamship companies, must have rubber, and although they may grumble somewhat at a rise in price, yet a few pence per pound in weight does not really represent much to them, and the orders come in as usual. It is not generally recognized by writers in the daily press what important customers shipbuilders and steamship companies are. A new battle ship, for instance, will absorb an amount of rubber which would, I imagine, rather surprise those who attribute the rise in price of rubber to the demands of the tire industry. The public judge by what they see, and one need not emphasize the fact that motor and cycle tires are more apparent than is the rubber in use on railways or on board ship. That the tire industry is absorbing an increasing amount of rubber is of course true, but it is fallacious to suppose that this demand is the sole important factor in the unique situation which is now being experienced.

THE practical article on this subject in the September issue of THE INDIA RUBBER WORLD will, I am sure, be read with much interest on this side, where

## RUBBER HEELS.

the subject is attracting so much attention. Some makers

here seem to think that the poor quality of so many of the heels that are turned out will have the inevitable end of bringing them into discredit, and consequently of reducing the business. However, there is an increasing demand for good quality stuff, the price not being a matter of the first importance. The reference to the black heel that will not bloom is of interest; some good work of this kind is being turned out by The Hyde Rubber Works, Limited, their best black quality showing no tendency to bloom. This result, I understand, is due to a careful selection of materials, and not to the use of potash, as laid down in the article referred to. By the way, the term potash is a somewhat loose one; is it caustic potash, carbonate of potash, or what is known as American black ash, that is used? It is not particularly easy for the uninformed buyer to purchase potash that is not largely composed of soda. Potash, I may say, is but rarely used in England for desulphurizing purposes, though the goods subjected to it have a superior finish and feel than where caustic soda has been used. The idea of the black heel is of course that it may be indistinguishable from the rest of the boot to which it is attached. There are rather a confusing number of titles by which these heels are known on the market. In very few cases do these represent a patent. The middleman in the business merely selects some fancy name which is impressed on the goods to order by the manufacturer.

I NOTICE that a patent has recently been taken out by the Dental Manufacturing Co., Limited (London), with regard to the insertion of nickel gauze in the rubber sheet used in the artificial teeth business. The nickel gauze forms a thin layer in the interior of the rubber sheet. The use of metal for this purpose is not new, as I am informed by a dentist of repute that over twenty years ago it was customary to use platinum gauze in this connection. The use of nickel, however, may be new. Certainly at the present price of platinum, which is higher than that of gold, there is little inducement for its use by anyone but the chemist who cannot do without it. Nickel, on the other hand, is now produced in much larger quantities than formerly, and the reduction in price no doubt commends it for the purpose referred to.

DENTAL  
RUBBER  
PATENT.

I AM informed on what appears to be reliable authority that variations in the selling price of rubber solution are due to the employment by some makers of rosin as an adulterant. I use the word adulterant, because I am ignorant of any special advantages which this body can give to the solution. It may be that for some purposes, and when price is a desideratum, that the admixture may be perfectly justifiable, though I know that rosin is not used by the principal makers. It is not so many years since rubber solution was made and supplied by the rubber works alone; nowadays, however, what with the greater spread of knowledge and the difficulties concerning transport, the position has changed and there are now numerous makers of solution on a greater or less scale. Some make for their own use alone, others do a retail trade in it. The rubber of course comes from the rubber works, and it is the exception rather than the rule, as of old, to use fine Pará only. Cheaper brands of rubber are more generally bought, and as far as one can tell seem to answer the purpose well enough. One source of rubber for so-

RUBBER  
SOLUTION.



lution making is cut sheet waste, which seems to repay collection from the numerous small users of such in our industrial centers. As this sheet may contain small quantities of substitute, this latter body may enter into rubber solution quite unbeknown to the manufacturer thereof.

IN *Page's Magazine* for August appear some notes on electrical matters by Mr. E. Kilburn Scott, M. I. E. E. He draws attention to the fact that faults in cables have been traced to impurities—dust, grit, etc.—which have evidently got incorporated with the rubber during the manufacture of the cable. He enjoins on the manufacturers greater carefulness to prevent this occurring, and instances as commendatory the action of the St. Helens Cable Co. (Warrington) in lining their roofs with Uralite—a substance which has a smooth surface and is moreover fireproof. From my own knowledge I can testify to the lack of attention to this point often displayed by rubber manufacturers, a whitewashed ceiling, for instance, being very liable to crack and deposit gritty particles in the rubber. The maintenance of an equable temperature all the year round in cable manufacturing is also advocated as conducive to good work. So far I agree with the author, but where I fail to follow him is in his reference to the special suitability of Lancashire for cable manufacturing. Whether or not the bulk of the cable made in the future will come from Lancashire is a speculative matter in which any one is entitled to speak, but it is strange to hear that as in cotton spinning the humidity of Lancashire renders it peculiarly suitable for cable making. Leaving the ordinary rubber cable out of account, it is certain that as far as dry core telephone cables are concerned the exact opposite is the case. It is incorrect to say that these cannot be made in Lancashire as well as in America, for they are now being made in quantity, but the humid climate is a drawback which has to be specially guarded against. It is this very moisture in the Lancashire air that gives it an advantage over New York in cotton spinning, and it is somewhat startling to hear that moisture generally considered the bug bear of insulation, is to be looked upon as positively advantageous.

MORE is heard at the present time of companies for rubber planting than of efforts to increase the supply from natural sources. In Peru it seems that there is plenty of untouched forest land which awaits the enterprise of the capitalist. I have before me, derived from an official source, the prospectus of a company entitled *Compañia Seleccionadora de Minas y Gomas del Perú*, with a capital of £20,000, the stated objects of which are the introduction of capitalists to the owner of mineral properties and rubber plantations, and the carrying out of pioneer work in the furtherance of mining and rubber production. The *personnel* of the board invites confidence in the *bona fides* of the concern, which deals with a country undoubtedly rich in both minerals and rubber. Anyone interested can no doubt obtain details by applying to the office, which is at Bodegonos 341 (altos), Lima, Peru.

#### A DIGRESSION TO GERMANY.

THIS firm, with which is incorporated the Harburg Gummi-Kamm Co., occupies an imposing block of buildings in close contiguity to the Hanover station at Hamburg, and has in recent years been largely extended. Founded in 1836, they have ever since held the position of the largest manufacturers of vulcanite goods in Europe. It is, I understand, the intention of the firm to hold a special jubilee in 1906, on which occasion full details of the rise and progress of the concern will be available for those interested. Fifteen hundred men are employed,

the manufactures being limited solely to vulcanite goods. In my walk through the offices, warerooms, etc., under the conductorship of Dr. F. A. Traun, I was much interested in the rubber museum, which I imagine must be one of the most complete in existence. The senior partner has spared no trouble or expense in obtaining specimens of known brands of rubber, and especially is the collection rich in the shoes, toys, etc., of pure Pará rubber, in which form the substance used to come to Europe in the very early days of its export from South America. I imagine that such specimens must now be almost of the scarcity, though probably not the market value, of the eggs of the Great Auk. Compared with what obtains in England, there is a much greater demand for vulcanite vessels and implements in the chemical manufacture in Germany. This is largely because the manufacture of fine chemicals for pharmacy, photography, and so on has not attained to any great proportions in England, but still there are many uses to which vulcanite goods can be usefully put in the heavy chemical manufacture which at present seem imperfectly known to those who might profit by their application. I gather that at present the London house of Messrs. Traun, which is situated in Red Cross Street, E. C., draws the bulk of its business from the electrical industry, the Silvertown company being the principal home competitor. In the vulcanite comb business, of course, the more recent competition of the Scottish Vulcanite Co. has had to be met, but taking the vulcanite industry all round, a glance at the works and the products of the firm under notice makes it clear that in this branch of the rubber trade the British cannot, as in other branches, lay claim to being in the very front rank.

THIS great company, whose works are situated about five miles from Hamburg, is too well known to call for any specific reference; indeed it is not many months since reference to its finances and products was made in this Journal. Mr. Hartman, one of the procurists for the company, gave me to understand that the one absorbing topic of interest to the trade was the abnormally high price of rubber. With regard to the Austrian *cartel*, in which they were interested by reason of their Wimpassing factory, he thought there was no reason to apprehend any difficulty on account of the comparatively few rubber works in Austria—fifteen altogether, I think he mentioned. In the case of Germany, with about fifty works, and also about another fifty small establishments where the rubber manufacture in some form or other was carried on, he said it would be hopeless to attempt any such combination. With regard to the progress made by the Scandinavian rubber footwear factories, he put it down largely to their protective duties. The Swedish duty is now 120 *krone* (18 *krone*=£1 sterling) per 100 kilos on rubber boots and shoes. The German duty at the present time is 60 marks, though negotiations are on foot which will result in all probability in this being raised to 100 marks per 100 kilos. I understand that at present the imports of German rubber shoes into Norway and Sweden have declined into insignificance, and a rise in the German duty can hardly prove more than a retaliatory measure.

THE Hannoversche Gummikamm Compagnie, Aktiengesellschaft (the Hanover Rubber Co., Hanover-Limmer, Germany), who, in addition to their extensive line of hard and soft rubber goods, have been successfully marketing motor, cycle, and vehicle tires on the Continent, announce arrangements for entering the tire trade extensively in Great Britain, now that the leading Dunlop tire patents have expired. The Hanover company have long maintained a selling branch in London.

A MAGAZINE  
REFERENCE:

PERUVIAN  
RUBBER.

DR. HEINRICH TRAUN  
& SONS

## RUBBER PLANTING AND EXPLOITATION.

## THE OHIO RUBBER CULTURE CO.

[Plantation near Coatzacoalcos, canton of Minatitlan, state of Vera Cruz, Mexico. Office: Canton, Ohio.]

**I**NCORPORATED August 27, 1904 under New Jersey laws, with a capital stock of \$275,000 and an authorized bond issue for improvement purposes of \$2,250,000. The company own 3671 acres of carefully selected rubber land on the isthmus of Tehuantepec, adjoining the property of the Tehuantepec Rubber Culture Co. (New York). The company's land is located on the Coatzacoalcos river, tributary to the Coatzacoalcos, and but five hours by boat from the Gulf. They propose to plant and cultivate 1,000,000 rubber trees and by October 1 expect to be ready to offer their securities to the public. The following officers were elected to serve a term of one year: William L. Davis, president; L. E. Sisler, vice president; Henry C. Eyman, second vice president; Hon. John B. Mosby, third vice president; Grant S. Pike, secretary and treasurer; T. Frank O'Brien, assistant secretary.

## THE TROPICAL DEVELOPMENT CO.

[Plantation "Monte Rosa," near Playa Vicente, district of Tuxtepec, state of Oaxaca, Mexico. Office: Canton, Ohio.]

INCORPORATED under Ohio laws, August 00, 1904. Have acquired 11,000 acres in Oaxaca, on the north bank of the Playa Vicente river, nine miles west of the town of Playa Vicente. It is intended to plant rubber extensively, and also sugar cane, and other tropical staples, and also to devote a liberal area to pasturage. A sugar mill is to be installed. The plantation manager, I. N. Kinney, has been for some time superintending the erection of buildings of lumber shipped from New Orleans. The officers and directors are business men of Canton and neighboring towns in Ohio. J. E. Carnahan, a steel manufacturer, is president; Atlee Pomereine, an attorney, treasurer; and A. S. Griffin, secretary of a steel corporation, secretary.

## THE OAXACA ASSOCIATION.

[Plantation: Buena Vista, canton of Acayucan, state of Vera Cruz, Mexico. Office: Royal Insurance building, Chicago, Illinois.]

THE latest inventory of this company, of date of April 30, 1904, shows the following number of rubber trees growing, at different ages:

7 years.....	1,200	4 years.....	18,000	1 year.....	60,000
6 years. ....	1,200	3 years.....	53,500		
5 years.....	13,500	2 years.....	388,600	Total ...	535,400

These are valued in the company's balance sheet at \$173,840. The company have also 231,900 coffee trees, of ages from 2 to 8 years, the latter of which have yielded fine crops.

## CHIAPAS RUBBER PLANTATION CO.

[Plantation "San Luis," near Palenque, department of Palenque, state of Chiapas, Mexico. Offices: Crocker building, San Francisco.]

[See THE INDIA RUBBER WORLD, March 1, 1904—page 18.]

THE annual election, early in August, resulted in the election of George T. Hawley as president, succeeding L. H. Bonestell. Mr. Hawley was formerly a vice president, together with L. S. Sherman and E. A. Girvin. There are now only two vice presidents, Mr. Sherman being elected as first and Mr. Girvin as second. The following were reelected: F. F. Bostwick, secretary; Charles Fredericks, treasurer; C. A. Westenberg, managing director. The remaining directors are Messrs. Field, Shreve, Winn and Washburne. The shareholders selected Dr. P. R. Watts, of Sacramento, California, to make the annual inspection of the plantation, which he will visit in October. Work

on the plantation is reported to be progressing satisfactorily, the monthly disbursements for some time past having averaged \$20,000, Mexican.

## RUBBER PLANTING IN NICARAGUA.

AMONG the rubber plantations owned in the United States and located in Nicaragua is one of about 15,000 four year old trees, on a tract of 252 acres, situated 21 miles north of Bluefields, near Cukra Landing, on one of the many lagoons along that coast. It is owned by a small group of citizens of Memphis, Tennessee, organized as The Memphis Tropical Fruit and Rubber Co., of which Dr. H. T. Lynch is secretary. The plantation was formed by a former owner of the land, and was purchased as a result of a visit which Dr. Lynch made to Nicaragua for the purpose of investigating rubber culture. He informs THE INDIA RUBBER WORLD that the trees on this property are in first class condition, and he is encouraged at the prospects of rubber culture in Nicaragua. The resident manager of the property is D. H. McCullough, a Memphis man.

## CEARA RUBBER IN MYSORE (INDIA).

THE superintendent of the government gardens in the native state of Mysore publishes in the *Mysore Gazette* a note on the growth in that region of the Ceará rubber tree (*Manihot Glaziovii*), the prospects for which he regards as highly encouraging. It appears that from the beginning the tree grew finely in Mysore, but that the tapping in the earlier years yielded most unsatisfactory results. With increased age, however, a liberal yield has been attained. It is asserted that one tree in the government gardens, 16 years old, tapped on 83 days last year gave 7 pounds of dry rubber, estimated by a London broker to be worth 3 shillings a pound, or a total of 21 shillings [= \$5.11]. Considerable planting has been done, and the superintendent above quoted recommends further planting.

## A NEW COMPANY TO EXPLOIT RUBBER IN PERU.

THE Carabaya Rubber and Navigation Co. was incorporated August 4, 1904, under Maine laws, with \$2,000,000 capital authorized, for the purpose of exploiting rubber and mineral resources, and conducting incidentally a transportation business, in southeastern Peru. The company is to acquire a large area of rubber lands lying in the province of Carabaya. The land is traversed by the river Inambari, and is within a practical working distance of the railway which extends from Mollendo, on the Pacific coast, to the city of Cuzco. It is estimated that the lands which the company itself will hold contain at least 1,200,000 rubber trees of mature size, and some 30,000 of these have already been tapped. The first purpose of the company will be to open up as rapidly as possible the rubber trees and collect the product and ship. The company expects at once to place a small steamer on the Inambari river and collect the rubber which may be obtained by tappers on properties other than their own along the Inambari and Madre de Dios rivers, paying for them in food and other supplies which the steamer will take along with it. The road which the company controls to their property and to the Inambari river makes the shortest and most inexpensive route to take rubber from these rich forests to the market. The following are the officers of the company: Hon. James A. Roberts, former state comptroller of New York, president; Dr. C. S. Merrill, of Albany, New York, vice president; H. D. Selleck, secretary; Frank Squier, president of the Queens County Trust Co.,



treasurer. The remaining directors are Hon. Warner Miller, former United States senator for New York, and William N. Ingraham, of Portland, Maine, and also José Pardo, recently elected president of Peru, and Juan Pardo, an engineer of high repute in that country. The offices of the company for the present will be at No. 256 Broadway, New York. The company has secured the services of J. Austin Pharaoh as general manager. He has been for several years past engaged in the successful exploitation of rubber in Bolivia and Peru. The section of Peru where the company's lands are located has long been known as rich in trees capable of yielding rubber of high grades.

#### A BOLIVIAN RUBBER COMPANY OUT OF THE FIELD.

THE Bolivian Rubber Co. of Baltimore, mentioned in the issue of this Journal for April 1, 1903 [page 226] as having been organized to acquire and develop certain important rubber concessions in Bolivia, was based upon the investment made by Henry A. Parr, a one time wealthy merchant of Baltimore, Maryland. It appears that, under the terms of the agreement with the vendors of the rubber properties involved, the company began work under an option and exported considerable rubber via Mollendo. The purchase of the properties, however, was never completed, owing to business embarrassments which overtook Mr. Parr, and the company above named has ceased to exist. It is understood that the rubber properties, however, continue to be worked by the *cessionnaires* from whom Mr. Parr's company planned to buy them.

#### RUBBER AT THE KUALA LUMPUR SHOW.

THE yearly Agri-Horticultural show of the Federated Malay States was opened on August 8, at Kuala Lumpur, by the governor, Sir John Anderson, K. C. M. G., in the presence of a large attendance. After the opening ceremonies, and the official party had partaken of *tiffin*, the *Straits Times* reports that "the party witnessed an exhibition of the process of preparing rubber. The process was carried out by Mr. P. J. Burgess, the government analyst from Singapore, on a machine specially manufactured by the Federated Engineering Co., of Kuala Lumpur. The rubber went in in sleek slabs of coagulated *latex*, only to emerge later in a lacerated condition, but shorn of all those impurities which depreciate its value in the eyes of the manufacturer. All appeared to be greatly interested, his excellency in particular putting several questions to Mr. Burgess relative to the process under exhibition." The *Straits Times* representative, writing of his journey from Singapore to the show, says: "On the way rubber was the favorite topic of conversation and a large number of young rubber trees was to be seen as the train passed the various estates. There is no doubt that the rubber industry has come to stay and at no distant day will be the mainstay of Malaya." John Little & Co., were mentioned as exhibiting machines for pressing rubber. The committee in charge of the show embraced Messrs. Stanley, Arden, E. V. Carey, and W. W. Bailey, whose names are familiar in connection with rubber culture.

#### BRIEF MENTION.

HERR R. F. WOHL, of Berlin, has been added to the board of the Kautschuk-Pflanzung "Meanja" Actiengesellschaft, making the eighth member. The company was formed in 1903, with headquarters in Berlin, to plant rubber (*Kickxia elastica*) in Victoria, Kamerun. [See THE INDIA RUBBER WORLD February 1, 1904—page 166.]

—Herbert M. Darby, writing from Klang to the *Malay Mail*, states that while in England recently he saw some £1 shares of the Selangor Rubber Co., Limited, sold at £3 2s. 6d., or 3½ times their par value. This company's plantation, started in

1899, was noticed at length in THE INDIA RUBBER WORLD for September.

—The Hon. George W. Peck, president of the San Pedro Rubber Plantation Co. (Milwaukee), engaged in planting in the Mexican state of Chiapas, on September 1 was nominated by the Democratic state convention in Wisconsin for the office of governor, which position he filled several years ago.

—The Vallambrosa Rubber Co., Limited, was registered April 22, 1904, at Edinburgh, Scotland, with £60,000 capital, to acquire and develop rubber plantations in the Straits Settlements. Registered office: 123, George street, Edinburgh.

—Late Ceylon newspapers contain advertisements, of which the following is a sample—

**PARA RUBBER SEED** at R5 per 1,000,  
Delivery August-October. Stumps at R12-  
50 per 1,000. May onwards delivery.—Apply,  
Yataderiya Tea Co., Ltd., Kegalle. S W

—indicating that rubber tree seeds have become there a staple article of commerce. The price quoted—5 rupees per 1000—equals \$1.62¼, or 6s. 8d. "Stumps" are seedlings which have been tapped, the price equalling \$4.06 per 1000.

#### RUBBER PLANTATION COMPANY PUBLICATIONS.

THE Vera Cruz Development Co., Canton, Ohio—*La Esmeralda Bulletin*, July, 1904. 4 pages.

El Triunfo Rubber Plantation—Alfred C. Adler, Boston, Massachusetts.—[Report on planting of Ceará rubber (*Manihot Glaziovii*) in Nicaragua.] 24 pages.

Conservative Rubber Production Co., San Francisco.—(a) About Our Rubber Plantation. 32 pages. (b) What Our Shareholders Say. 12 pages. (c) Answers to Some of the Rubber Questions Shot at Us. 12 pages.

Sulo-Suchil Plantation Co., Toledo Ohio.—(a) Report of John A. Giedeman, Inspector. 4 pages. (b) Plantation Sulo-Suchil. [Photographic views to illustrate preceding report] 40 pages.

#### RUBBER MATS AND BEESTINGS.

ONE of the Philadelphia newspapers contained recently an article on the business done by an apiarist near that city in supplying beestings to a chemical laboratory as a source of formic acid, for use in the treatment of rheumatism. This is a business which for some time past has contributed to the profits of beekeeping in different parts of the country, but the novel feature in the Philadelphia newspaper report related to the method employed in depriving the bees of their stings, together with the sac containing the poison. Bees, it was stated, dislike the odor of India-rubber, and, when a mat of this material is placed near their hives, attack it fiercely, thereby losing their stings. The newspaper adds: "Other apiarists who are undertaking to supply the demand for beestings, pick up the bees, one at a time, with small tweezers, and with another pair of tweezers extract the stings, afterward freeing the insects. This is a slower method than the use of the rubber mat, but apiarists are finding it profitable." In response to an inquiry for details addressed to the Pennsylvania beekeeper referred to, he wrote:

TO THE EDITOR OF THE INDIA RUBBER WORLD: Your letter reached me promptly and all understood. I may seem selfish, but I am sorry I cannot comply with your request. I have spent many years in the bee business, experimenting and practising, as well as studying, and I do not feel at liberty to give years of experience away at the present time. What little the papers have written up has been drawn from me incidentally, and a great deal of it is incorrect. Trusting you will appreciate my position, as it is entirely a matter of business, I remain, Yours truly.

## INDIA-RUBBER AT THE ST. LOUIS WORLD'S FAIR.

JURY No. 11, of the International Jury of Awards for the Louisiana Purchase Exposition at St. Louis, had for its work the examination of, and making of awards for, the exhibits comprised in three Groups in the department of Manufactures. In the official catalogues these groups, with their subdivisions, were designated as follows, except that the descriptive matter is shortened here:

**Group 35. Articles for Traveling and for Camping; India-Rubber and Gutta-percha Industries.**

Class 201. Trunks and traveling cases and fittings; cushions; various requisites for travelers.

Class 202. Portable equipment especially prepared for traveling and for scientific exploration.

Class 203. Tents and accessories; camp equipment generally.

Class 204. Military tents and furniture.

Class 205. Equipment and methods used in the manufacture of India-rubber and Gutta-percha goods.

Class 206. General products of the India-rubber and Gutta-percha industries. Waterproof clothing and boots and shoes.

**Group 36. Toys**

Class 207. Equipment and processes used in manufacture.

Class 208. Playthings; dolls; talking dolls; mechanical toys; musical instruments; dolls' furniture; animals; toys in India-rubber and in gold beaters' skin; scientific and educational toys; games.

**Group 60. Leather, Boots and Shoes, Furs and Skins, Fur Clothing.**

Class 377. Leather in every variety.

Class 378. Boots and shoes, bootees, slippers, overshoes, soles, accessories, etc.

Class 379. Gloves.

Class 380. Furs and skins, dressed and tanned.

Class 381. Fur clothing, caps, hats, hoods, gloves, boots, etc.

Class 382. Fur mats and robes; fur trimmings.

Jury No. 11 was made up of experts in all the lines embraced in this list, and consisted of the following named persons:

J. M. HAYS, *Chairman*; Giesicke-D'Oench-Hays Shoe Co., St. Louis.  
HENRY C. PEARSON, *Secretary*; THE INDIA RUBBER WORLD, New York.

EUGENIO DAHNE, M. E., Brazilian Commissioner. Vice chairman Group 35.

ADOLPH RICHTER, F. Ad. Richter & Co., Rudolstadt, Germany. Vice chairman Group 36.

ALFRED SCANNELL, President Alfred Scannell Leather Co., St. Louis. Vice chairman Group 60.

W. B. ALTSMAN, The Drew-Selby Co., Portsmouth, Ohio.

W. L. DESNOYERS, The Desnoyers Shoe Co., Springfield, Illinois.

T. L. JOHNSON, Superintendent Special Exhibits, Louisiana Purchase Exposition, St. Louis.

CHARLES J. LIPPERT, President and Treasurer The Leonard Roos Fur Co., St. Louis.

I. C. PAUL, P. P. Paul & Co., Cincinnati, Ohio.

GEORGE PERRY, Dayton Last Works, Dayton, Ohio.

GUSTAV SCHLECHT, Western Leather Co., St. Louis.

O. F. SCHWERDTMANN, Schwerdtmann Toy Co., St. Louis.

R. E. TOMMERSON, Concessionaire, Louisiana Purchase Exposition, St. Louis.

HENRY HUISKAMP, Huiskamp Brothers & Co., Keokuk, Iowa.

ARTHUR JONES, A. J. Bates & Co., Chicago, Illinois.

A. R. TIRRELL, Torrey, Curtis & Tirrell, Weymouth, Massachusetts.

A. L. FAY, Ganss-Langenberg Hat and Glove Co., St. Louis.

JUAN P. THOMAS, Editor *Revista Ilustrada de la Zapateria*, Argentina.

JULES LAFON, President d'Honneur de l'Union General des Gautiers, Paris, France.

FEIFFER-BRUNET, Paris, France.

HENRY D'ALLEMAGNE, Archiviste-Paleographe, Paris, France.

LOUIS VUITTON, Paris, France.

Baron F. VON BARDELEBEN, Imperial German Commission.

Lieutenant J. O. MONASTERIO, Attache Mexican Commission.

SUKESBEIRO DOI, Department of Education, Japan.

RISABURO OTA, Commission of Imperial Japanese Government, Japan.

The Editor of THE INDIA RUBBER WORLD, having been ap-

pointed on this jury, was elected secretary by his colleagues. Besides serving as secretary for Jury No. 11, he was a member of the committee for each of the Groups, and chairman for Classes 205 and 206. After the jury had completed its work, he was unanimously elected chairman, to represent it in the

DINNER TENDERED BY THE CHIEF OF DEPARTMENT AND THE MANUFACTURES COMMITTEE, TO THE INTERNATIONAL JURY OF AWARDS FOR MANUFACTURES, GERMAN IMPERIAL PAVILION.

M E N U

Consomme

*Martini*

Salmon Trout, Sauce Or

*Kud's Leimer*

Filet of Beef, Mushrooms

*Chateau Puy Ducauc*

Capon du Mans

*Mummi's Extra Dry*

Salade Internationale

Glace Bombe Louisiana Purchase

*Liquers*

Coffee

higher jury for the department of Manufactures, composed of the chairman and vice chairman of each of the group juries. Altogether, Jury No. 11 had more than 400 exhibits to pass upon.

It is not in order for a juror to talk much about jury experiences, unusual though they be and full of interest. One might perhaps dwell a moment on the banquets and receptions, and of

these there are two that will ever live in the writer's memory. The two menus here appended tell the story in part. At the first, in the magnificent German Imperial Pavilion, there were gathered some 250 guests, and among the speakers were the

Hon. David R. Francis, president of the Exposition; F. J. V. Skiff, director of exhibits; M. H. Hulbert, chief of the department of Manufactures; the Imperial commissioners from England, Germany, France, Austria, and Japan, and three Americans, including the

DINNER TENDERED BY THE AMERICAN MEMBERS OF JURY NO. 11, COMPRISING GROUPS 35, 36, AND 60, TO THE FOREIGN MEMBERS OF THE INTERNATIONAL JURY OF AWARDS FOR MANUFACTURES.

M E N U

Blue Points

Olives Chicken Broth  
Celery

*Amusements*

Filletts of Pompano. Meunier  
Cucumbers Potato Rissoles

Mignon of Beef. Cheron

Punch Jefferson

Turtle Doves, sur Croutes  
Salade Meub

Bombe Pralinee

Cheese

Coffee

*Manhattan Cocktails*  
*Hot Sauternes*  
*Pommard*  
*White Seal*  
*Apollinaris*

Editor of this Journal. At the second dinner, which was more informal, everyone present spoke or joined in singing "America" and "La Marseillaise."

After the jury work above alluded to had been finished, the Editor had an opportunity—though a limited one, on account





A QUORUM OF JURY NO. 11, BEFORE THE BRAZILIAN PAVILION, ST. LOUIS WORLD'S FAIR.

of the lack of time—to draw up a list of the rubber and allied exhibits, which is appended. This list is intended to serve the double purpose of a guide to those who have not yet visited the Exposition, and who may desire to see what it contains in rubber during October and November, and also as a record of what the rubber of trade of the world contributed toward the great World's Fair of 1904.

#### UNITED STATES.

In the following list of exhibits relating to the India-rubber and allied trades, five excellent displays are not included, for the reason that they have already been described and illustrated in *THE INDIA RUBBER WORLD*—namely, those of the following concerns:

The B. F. Goodrich Co .....	Akron, Ohio.
Banner Rubber Co. ....	St. Louis, Missouri.
The Eureka Fire Hose Co. ....	New York.
Apsley Rubber Co. ....	Hudson, Massachusetts.
Voorhees Rubber Manufacturing Co. ....	Jersey City, New Jersey.

It is possible here to devote only a brief amount of space to the remaining exhibits, as follows:

**GOODYEAR TIRE AND RUBBER CO.** (Akron, Ohio) had an exhibit in the Transportation building that at once attracted the eye of the passerby because of the huge pebbled ball, some two feet in diameter, that hung at the entrance, and drew attention to the Saunders pneumatic golf ball. Within the space allotted to the company were tires—solid and pneumatic, for carriages, autos, and bicycles; rubber tiling in various colors; druggists' sundries; horseshoe pads, in black and white; and a special machine for attaching solid tires to vehicles.

**THE REPUBLIC RUBBER CO.** (Youngstown, Ohio), in the Transportation building, showed samples only of their solid tires for vehicles, the exhibit being in charge of Mr. W. B. Neff.

**THE KOKOMO RUBBER CO.** (Kokomo, Indiana) had a modest but effective exhibit of solid and pneumatic tires, in red and black, a fine picture of their factory, hams of crude rubber, and so on.

**THE SWINEHART CLINCHER TIRE AND RUBBER CO.** (Akron Ohio), on a long table protected by a brass rail, showed types of their tires, large and small, and while there was no one in charge to exploit their virtues, there were plenty of Swinehart booklets that told the story very completely.

**THE FIRESTONE TIRE AND RUBBER CO.** (Akron, Ohio) showed in the Transportation building some of the largest solid tires ever produced. These were exhibited both on wheels and alone. In addition were samples of all sizes, from the smallest up. The exhibit was well arranged—the furniture of oak, a handsome rug on the floor, and the whole enclosed in brass railings.

**THE FAWKES RUBBER TIRE CO.** (Denver, Colorado) showed their special type of tire in the Transportation building, and as usual had a crowd of interested seekers after something in tires that will not puncture.

**THE STANDARD UNDERGROUND CABLE CO.** (Pittsburgh, Pennsylvania) showed three cases containing samples of telegraph, fire alarm, and electric light and power insulated wires. They also showed a section of a subway into which were carried lead covered cables from a huge reel. The exhibit was

simple but graphic, and was installed by the company's St. Louis branch.

THE WOVEN WIRE RUBBER CO. (New York) had an exhibit adjoining that of the Swinehart Clincher Tire company, given up wholly to channeled horseshoes of aluminium, the tread of the shoe, molded into the channel, being made of rubber and woven wire.

THE I. B. KLEINERT RUBBER CO. (New York) had in the Manufactures building an exceedingly tasteful and comprehensive exhibit of their full line of goods. Some twenty types of dress shields were shown, all of which were explained and illustrated in their "Dress Shield Book" of which many thousands were distributed.

THE SILL PNEUMATIC HORSE COLLAR CO. (Bloomington, Illinois) showed two samples of horse collars of the pneumatic type, of India rubber in part, and promised to send catalogues to all who registered their names.

THE HALLANAN MANUFACTURING CO. (New York) showed a fine collection of rubber horse shoe pads in many different styles at their booth in the Manufactures building.

THE VEHICLE APRON AND HOOD CO. (Columbus, Ohio) had an excellent showing of rubber storm fronts for carriages, the goods being displayed on four types of carriages.

SAKS & CO (New York) had a fine display of wearing apparel for automobilists. They showed both French and American garments in cravenette and single texture rubber. One garment which particularly deserved mention was a wine colored silk lined surface coat of American make, fitted with broad leather collar, and of excellent design. There were also couverture trousers of black rubber lined with brown drill, auto coats with rubber yoke, shirt effect, and so on. The exhibit was in care of Mr. Harold Debreast.

THE L. C. CHASE CO. (Boston) erected in the Palace of Manufactures a huge glass fronted case with two wings for their various products. In the wings were displayed robes, etc., while the central portion was given up to Chase leather and carriage cloths, a fine showing. The colored goods in the former fabric were particularly fine, as were the various types of embossed surfaces.

THE PANTASOTE CO. (New York) had an especially attractive exhibit of their goods, which were displayed in a large open double pavilion, in charge of an expert demonstrator. Their product, in many new embossed designs, was used as a covering for the furniture in the pavilion, while booklets, sample swatches, and information were freely distributed.

JOHN ROYLE & SONS (Paterson, New Jersey), who had one of their tubing machines as a part of the exhibit of the Voorhees Rubber Manufacturing Co., distributed a neat folder telling the story of the Royle machine.

WERNER & PFLEIDERER (Saginaw, Michigan) had a fine exhibit of machinery in the Liberal Arts Palace, only one machine, however, interesting the rubber trade—their masticator, shown for the first time at an American world's fair.

THE TEXTILE MACHINE WORKS (Reading, Pennsylvania) were located in the Manufactures building, and had a live exhibit of many types of braiders for use in covering insulated wire. Although a part at least of their machinery should have been in the Palace of Electricity, visiting electricians and manufacturers sought them out and their machine received much attention.

THE SINGER MANUFACTURING CO. (New York) had in their magnificent exhibit machines for almost every kind of sewing that may be imagined. One of the most notable was that for stitching rubber belting, a machine well known to the rubber trade, and one that stands alone in its class.

THE COMPRESSED AIR HOUSE CLEANING CO. (St. Louis) showed to big crowds daily how compressed air carried through lengths of rubber hose cleaned carpets far more effectively than any other system. Rubber manufacturers especially looked on with satisfaction, forecasting a big outlet for hose as this system becomes more generally used.

#### GERMANY.

CONTINENTAL CAOUTCHOUC AND GUTTAPERCHA CO. (Hannover) had a notable exhibit in the Transportation building, in charge of Mr. A. E. Richter. The big pavilion which contained the goods displayed was done in red, white, and gold, and had for its main display the "Continental" motor tires, that have scored such a success in Europe. As a souvenir there was presented a brochure bound in red and gold, giving a history of the great Gordon-Bennett race of 1903. The sixteen fine illustrations told the story of the race most graphically, and incidentally both text and pictures gave due credit to the Continental tires, that were such potent aids in the winning of the trophy.

THE PETER UNION PNEUMATIC TIRE CO. (Frankfort o/M) had a fine display of pneumatic tires for bicycles and especially for automobiles, in charge of Mr. Paul Friedrichsen. The exhibit covered the Peters patent double rim, and puncture proof bands, together with the Peters patent rims for solid tires, and a solid tire with hard rubber base.

#### FRANCE.

MICHELIN & CIE. (Clermont-Ferrand) exhibited, in the Transportation building, an attractive showcase, in which were displayed sections of their pneumatic tires, tire tools, repair kits, pumps and so on. It was one of the notable displays of goods in this line.

E. C. GRAMMONT (Paris) made an exhibit in the Electricity building of insulated wire and cables, treads for tires in red and black, and general rubber goods, all in a fine cabinet fitted with glass shelves and festooned with electric lights. He also distributed catalogues in English, French, German, and Spanish.

BERGOUGNAN & CO. (Clermont-Ferrand) had a general exhibit of molded work in red and white rubber and a variety of automobile tires. One that attracted the most attention had leather studs molded into the tread to prevent slipping, and also to add to the life of the tire.

FALCONNET-PERODEAUD (Paris) showed six wheels equipped with pneumatic tires, to which was attached a "patented cemented protector." There was also shown the "Normal" tire, with what is known as the "compressed tread band."

L. FRANCOIS GRELLON & CO., (Paris), a very important house, had a small but comprehensive exhibit of general technical rubber goods. Their product in insulated wire and hard rubber was also well exemplified. A stack of Balata belting, with samples of the crude gum, attracted much attention.

L. EDELINE (Paris) also showed a general line of mechanical rubber goods, together with tires, tire covers, and certain druggists' sundries.

M. JULIEN PINCON (54, Boulevard Magenta, Paris) showed a steel horse collar with a pneumatic accessory which he called a "tyre," and which had much merit. The collar was light, strong and very simple.

THE SOCIETE FRANCAISE DES CABLES ELECTRIQUES, system of Berthold, Boull & Co. (Lyons), showed a rough shaft of Gutta-percha covered cable, in a glass case.

ANTOINE WOLBER (Paris) displayed in the Transportation building 49 samples of various types of bicycle tires, together with a graphic chart showing the beginning of his business and



its present size. According to this chart he now operates two factories, two dynamos of 500 HP., and in 1903 produced 150,293 pneumatic tires. The special tires shown by him were the "Sprinter," "Racer," "Stayer," "Journey-Racer," "Motor-cycle," and "Livery cycle."

THE SOCIÉTÉ INDUSTRIELLE DES TÉLÉPHONS (Paris) showed an oaken case in which were a full line of samples of their insulated cables.

#### BELGIUM.

ANDRÉ DE VRIENDT showed a few pieces of waste rubber in a case in the Belgian pavilion, but its only value was to show that among other waste materials he bought vulcanized rubber scrap.

#### ITALY.

PIRELLI & CO. (Milan) had a very important display of all kinds of rubber goods in the Palace of Electricity. There were toys, diving armor, matting, hose of all kinds, tires, battery jars, clothing, hard rubber, insulated wire and cables, etc. There were also fine pictures of their great factories and a list of their ten diplomas of honor, and many gold medals awarded at former exhibitions.

THERE were of course many other exhibits that consisted in part of rubber. For example, the Brunswick-Balke-Callender Co. (New York) showed billiard cushions. Crutzen Brothers, of Belgium, had in with leather goods some rubber soled shoes, and there were exhibits such as the Whiteley exerciser, and the huge balloons of silk covered rubber whose owners always refused to tell by whom they were manufactured.

#### CRUDE RUBBER EXHIBITS.

IN the great government exhibit for the Philippines the one building that of all others was of interest to the writer was the Forestry building. It was in this that the native India-rubber and Gutta-percha from the new American possessions appeared. The rubber was not much to look at, nor was there much of it. Besides, it was black, sticky looking, and of low grade. But the Gutta-percha exhibit was very satisfactory. Here were sections of two huge *Palaquium* trees, fully two feet in diameter, while grouped around were rolls, blocks, and balls of gutta in great quantity. There were also baskets as big as hogsheads full of gutta balls the size of a cocoanut, and near by a box covered with coarse wire cloth, in which were several tons of the balls. According to the display cards most of the gutta came from the island of Mindanao, its source being the *Palaquium latifolium*. Neither here nor in the building devoted to Philippine machinery and utensils were there to be found any evidences of the strange and crude machines for working gutta and rubber, with sketches of which a certain soldier-correspondent in the Philippines has succeeded in bamboozling various American papers.

The Ceylon exhibit of cultivated rubber from the *Hevea* was not large, but was particularly fine. Culloden, Heatherly, Gikiyanakanda, and Arapolakanda estates furnished about 200 discs that were easily the best crude rubber ever seen in the United States. It is doubtful, however, if the agricultural experts can comprehend what this exhibit means. I became so interested in it that I interviewed some of the high officials with regard to getting others interested, and they suggested a letter to the chief of Agriculture at the fair, and the following letter is the first result:

F. W. TAYLOR, Esq., Chief of Agriculture, Louisiana Purchase Exposition, St. Louis.

MY DEAR SIR: May I call your special attention to the importance of the exhibits of crude India-rubber in the Ceylon section in the Palace of Agriculture.

This rubber represents the final successful introduction of the South American rubber tree—the *Hevea Brasiliensis*—into the Far East, and is the product of the large estates Culloden, Heatherly, Arapolakanda, and Gikiyanakanda, two of which I visited and inspected last winter, and can certify that they are producing rubber profitably and on a commercial scale.

The rubber sells in Liverpool or New York for a much higher price than any other in the world, is perfectly clean, and of even quality, and is used in the very finest of goods. This most satisfactory evidence of a new and reliable source of fine rubber, particularly as it comes from cultivated trees is of use to the whole industrial world, and would seem to merit special recognition from this Exposition. Respectfully,

HENRY C. PEAKSON.

Chairman Classes 205 and 206, India-rubber Processes and Manufactures, Department D, Group 1, Editor THE INDIA RUBBER WORLD, New York.

Brazil devoted one corner of her rustic pavilion in the Palace of Agriculture to India-rubber. There were bottles of the latex of *Hevea*, and specimens of coarse and fine Pará rubber in big balls and hams, sheets, spindles, and various odd forms that rarely reach the American market, at least.

Costa Rica exhibited a fine water color of the true *Castilloa elastica* tree and various jars in which were specimens of rubber from the washed latex of *Castilloa alba* (?). There was also rubber from the *Castilloa Costaricana*. There were also some twenty rolls of "Central" rubbers and some gums much like "Nicaragua Strip." There was also a sample of "gutta" from *Tabernaemontana* sp., a dark, resinous, sticky product.

In the general Cuban exhibit was a large case containing crude rubber from cultivated *Castilloa* trees in Cuba, shown by Federico Martinez de Castro, of Havana. The rubber looked well and attracted much attention.

German East Africa displayed a fine lot of ball rubber. First there were nine baskets in which were little hard balls, all very similar in appearance, but labelled respectively "Nitumbe," "Machinga," "Mohoro," "Mahange," "Donde," "Matechobona," "Hyari," and "Makowei river"—all from *Landolphia* species. Then there were rolls of Gutta-percha from the *Palaquium suffianum*, while on the wall near by was a card from the establishment of Dr. H. Traun & Sons (Hamburg, Germany) showing these rubbers made up into goods.

Rhodesia, by a wall exhibit, showed a vine and tendrils, probably a *Landolphia*, and ten sausage shaped samples of rubber, dry and firm, but full of bark.

Madagascar displayed good samples of the "Pinky" sort, together with black sticky slabs from the *Landolphia spherocarpa*, and black discs from the *Mascarenhasia lisianthiflora*.

From Bahr-el-Ghazal, in Egypt, came a few spindles of African rubber. Siam furnished two small pyramidal cases of rubber of the Assam sorts.

The Orizaba Rubber Plantation Co. (Chicago) were finely located in the Palace of Agriculture, Mr. H. Jay Smith being in charge. They showed some 200 photographs of growing *Castilloa*, together with sections of trunks of rubber trees 1, 2, 3, 4, 5, and 6 years old. They had also samples of rubber, and the pavilion was most tastefully decorated with various Mexican trophies.

THE WONDERFUL COLORADO RUBBER.—A correspondent of the Boston *Transcript*, in a four column summary of the manifold resources of Colorado, makes this brief reference to the most wonderful product of that state: "There is no space here even to mention the scores of new grain grasses and plants—the rubber plant for example, whose product is equal to the best Pará gutta percha—trees and fruits which are being introduced and raised successfully and profitably." Who else knows anything about "Pará gutta percha"?

## NEW GOODS AND SPECIALTIES IN RUBBER.

## THE SAMSON LEATHER TIRE.

THIS is a rubber tire, of the "Clincher" type, provided with a tread band of chrome leather, protecting the whole of the exposed part of the pneumatic tire, to which it is vulcanized. The leather band is fastened to the cover of the rubber tire by rivets, in two, three, or four

rows, according to the width of tread required. The rivet heads, which are round, project about  $\frac{1}{10}$  inch above the surface of the leather. The object of this leather tread is to prevent punctures, while it also tends to prevent slipping, in which function the rivet heads also aid. The Samson tire of late has attained no small degree of popularity in the United States and in most



European countries, and has been employed with entire success on automobiles figuring in some recent notable races. The American house is at No. 12 West Thirty-third street, New York, the manager of which, A. E. Gallien, has leased premises in Brooklyn (New York) for the manufacture of these tires. It is not understood that the rubber parts are to be made at the premises referred to.

## SQUIRES'S "QUICK" GOLF BALL.

THE construction of this ball involves the use of a rubber core in two sections, joined together by screw threads; within

which is placed a small ball of aluminum, the inside of the rubber core being so formed as to provide a number of air cells. The whole is placed within a Gutta-percha cover. The illustration herewith shows the method of joining the two sections of the rubber core, which is pointed out as having advantages over rubber wound into a core

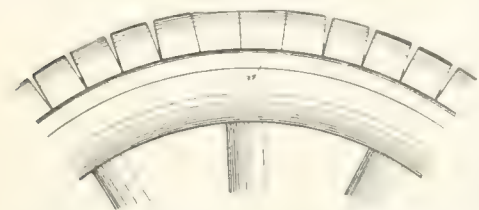


in the form of thread. The cover may also be formed of semi-hard rubber, with which aluminum has been compounded. Patents have been applied for. [The Akron Dental Rubber Co., Incorporated, Akron, Ohio.]

## MORE KROTZ TIRE PATENTS.

THE newly formed Krotz Manufacturing Co. (Springfield, Ohio) have for their object the exploitation of rubber vehicle

tires under patents issued to Alvaro S. Krotz. In the last INDIA RUBBER WORLD [page 421] was illustrated the essential feature



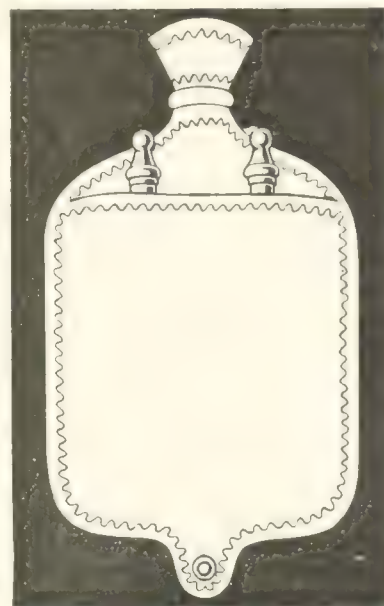
covered by the first Krotz patent. Under date of September 6 another United States patent [No. 769,172] was issued to Mr.

Krotz, the same being for the combination with a metallic rim channel, with parallel removable sides, of a rubber tire, the tread of which is divided into short sections by narrow slits, while the base forms a continuous band, said rubber tire being held in the channel by means of longitudinal retaining wires or bands running through the base. It is understood that a third patent is pending. The company report that they have carried out careful tests and will soon be ready to market.

## "BOTTLEHOT."

THE accompanying illustration so clearly indicates the nature of a new device now being offered in the druggists' sundries line as to render any extended description of the same unnecessary. Primarily its use is to keep the contents of nursing bottles warm for a considerable

length of time, which often will prove a great convenience, especially at night. It is also a desirable contrivance for use while on a journey. But its uses are many. It may be used to keep poultices, liquid medicines, and the like, warm, either at night or at other times; it may be used also as a hot water bottle.

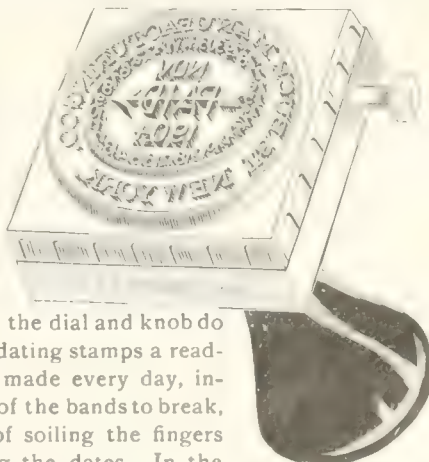


"Bottlehot" has a duplex heating side, which is referred to as almost doubling the duration of the heat. [Bottlehot Bag Co., No. 1 Madison avenue, New York.]

## BUCK'S NEW DIAL DATING STAMP.

THIS new stamp, for which patents are pending, is offered as possessing a number of advantages over the ordinary dating stamps. For one thing, a distinctive advantage exists in that fewer changes

are to be made—one change per month, by simply taking out the month logotype and replacing it with the new month, and changing the year date but once a year; the dial and knob do the rest. In the band dating stamps a readjustment has to be made every day, involving the liability of the bands to break, and the annoyance of soiling the fingers with ink in changing the dates. In the Buck stamp, the day of the month is shown by simply turning the knob so that the arrow on the revolving center of the stamp



the knob so that the arrow on the revolving center of the stamp



points to the day wanted, as shown in the illustration. This stamp has the Buck pneumatic cushion under the entire die. [T. S. Buck Manufacturing Co., No. 221 Canal street, New York.]

#### PRUSSIAN RUBBER SPONGES.

THE Hanover Rubber Co., Limited (Hanover-Limmer, Germany), after several years' experimenting, are manufacturing an article which they call "The Prussian Pure Rubber Sponge, 'Gloria'". These sponges are reported to have met with great success in Europe, on account of their softness and fine texture, while the cost is reasonable. George Borgfeldt & Co. (New York) are sole agents for the Hanover company, in the United States and Canada.

### THE AMAZON RUBBER PROSPECT.

BY AN OCCASIONAL CONTRIBUTOR.

LOWER rubber prices in the not distant future are to be expected, in the very nature of things; already the high prices of the past year have had the effect of curtailing production, and their long continuance would drive many manufacturers from business. But present prospects justify an expectation of liberal supplies of rubber during the present crop year, which will have the effect of lowering prices somewhat, even with a well sustained consumption. The past twelve months have witnessed an increased production of "medium" sorts, after a tendency to decline for two or three years, and there is no reason to suppose that the present rate of output of these sorts will not continue, at least as long as a high price level prevails.

Preparations have been made for getting out a large crop of Pará rubber, judging from the movement of laborers and provisions toward the upper Amazon regions. The high prices prevailing at the commencement of the crop season were favorable for such a movement, besides which an especially severe drought exists in Ceará, a state which, under such circumstances, always supplies a large force of rubber gatherers, who otherwise would remain at home and work their farms.

Conditions in the Acre district are more favorable for a large output of rubber than for a long time past. That probably is the richest rubber region in the whole Amazon system, but its production has been hampered by various political and other troubles, which seem now about at an end. After the Brazilian treaty with Bolivia, some friction arose with Peru, but that now is a matter of the past. To-day there is a question of authority between the state government of Amazonas and the government at Rio, which insists upon administering the Acre as a Federal district, but this is not likely to interfere with the working of the rubber camps.

Nothing can ever be predicted with certainty in regard to the extent of the rubber crop, but it seems reasonable to expect, in view of favorable conditions in the rubber producing countries, and the stimulus afforded by higher prices than ever before prevailed for such a great length of time, an increase this year in the margin between the production and consumption of rubber. The natural effect would be somewhat lower prices, though a largely increased production in any given year is an impossibility, owing to the slow rate of progress in the tropics which must always be taken into account.

Progress has been especially slow in the development of the Acre district, due in part to causes which have not disappeared with the ending of the political troubles there. The expenditure of a million dollars for improving the waterways in that region would work a wonderful improvement in navigation and do much to stimulate the business of gathering rubber.

But where is the money to come from, and who would undertake the work? There is no private interest prepared for it, and government undertakings in the Brazilian states require an immense amount of time for results, if any are ever reached. During some months of each year the Acre itself is a very narrow and shallow stream. It could still be navigated by steam launches, however, but for the many trees which fall into it and which it is nobody's business in particular to remove. Yet the total cost of removing such obstacles, and of dredging here a bit and blasting there a bit, would not be great, in view of the benefit to be derived, and the stream could be made navigable all the year and for larger vessels than can now pass through it during low water.

At present communication with the rubber districts on the Acre is practically cut off for months at a time. Not only does no rubber come out, but the settlers there have no means of obtaining supplies. All their food is imported, and at times their condition becomes one of real hardship from the lack of food, resulting in weakness and inability to resist the fevers so prevalent there. The keeping open of the Acre alone would work a great change in the rubber business of the Amazon valley.

But the governments concern themselves more with the highest rate of export duty that the rubber will stand, and with who shall collect the tax, and with such schemes as that in which a private corporation at Manáos has been authorized by the congress to levy an extra tax upon all rubber exported from the state, to provide capital for a bank. While the avowed object is to provide an accumulation of capital, available for the rubber merchants in financing shipments, the only apparent result to date is that the promoters of the bank have been afforded an easy means of making a living.

### MUTUAL FACTORY INSURANCE.

AT a recent meeting of the Furniture Association of America, Mr. Benjamin Taft, secretary of the Rubber Manufacturers' Mutual Insurance Co., read a paper on "Why Mutual Fire Insurance is Feasible, and Why." Among other things he said:

"In many ways it is quite feasible to form a furniture manufacturers' mutual insurance company. The plan of the different trades or manufacturers insuring each other is not a new one. In 1888 the cotton manufacturers organized a mutual, and their success is too well known to need any remarks. In 1863 the millers started their mutual to insure flour mills. In 1895 the Lumbermen's Mutual came into the field, and in 1884 the Rubber Manufacturers' Mutual commenced business, and here is an example that you might well follow.

"The rates on rubber factories when that company was formed were so high that many of them could not afford to carry any insurances, and when the company was organized with rubber men making rules for the guidance of rubber men the business commenced to look up, and to-day the despised rubber factory of 1884 can get a \$1000 policy for \$1.50, while in 1884 it had to pay \$30 for the same identical \$1000 policy. You can very readily see from this that one trade making rules for itself to follow and having a company of its own to carry them out, the company is practically assured of success at the start. Now, what was done by the cotton manufacturers in 1888 and the rubber manufacturers in 1884, certainly seems to me can be done by the furniture manufacturers in 1905, as there is no man who is willing to admit that the cotton manufacturers or the rubber manufacturers are any smarter than the furniture manufacturer."

## RECENT RUBBER PATENTS.

## UNITED STATES OF AMERICA.

ISSUED AUGUST 2, 1904.

- N**O. 766, 160. Playing ball [for golf, shell apertured to prevent cracking]. H. Bentz, New York city.
- 766,170. Hose reel [for indoor fire protection apparatus]. E. Cliff, assignor to Cliff & Gilbert Co., New York city.
- 766,204. Hypodermic syringe. R. Walsh, Washington, D. C.
- 766,252. Cuspidor. E. F. Holland, New York city.
- 766,297. Wheel for vehicles [having two solid rubber tires, side by side]. A. Turkington, Lafayette, Ind.
- 766,336. Vaginal irrigator. C. O. Farrington, Palestine, Texas.
- 766,463. Pneumatic tire [adapted to removable channel flanges]. H. A. Palmer, Erie, Pa.
- 766,560. Fountain pen. O. E. Weidlich, Cincinnati, Ohio.
- 766,637. Wheel tire. [Solid rubber]. A. H. Marks and W. M. Metzler, assignors to The Diamond Rubber Co., Akron, Ohio.
- 766,640. Hose rack. M. C. Meehan, Buffalo, N. Y.
- 766,711. Elastic cushion heel. J. F. B. Litchfield, Worcester, Mass.
- 766,734. Force pump. C. Schellhammer, Warren, Pa.
- 766,759-756,760. Fountain pen. A. B. Davis, assignor, by mesne assignments, of one-half to E. H. Chase, both of Philadelphia.

*Trade Mark.*

- 43,103. Rubber tire for vehicles. G & J Tire Co., New York city. *Essential feature.*—The characters "G & J" inclosed in a figure described as an inverted isosceles triangle having indentations formed at the vertices thereof. Used since Oct. 1, 1903.

ISSUED AUGUST 9, 1904.

- 766,867. Inhaler for anesthetics. G. L. Bennett, Chicago, Ill.
- 766,910. Inflation valve. J. H. Spray, assignor to Scovil Manufacturing Co., Waterbury, Conn.
- 766,926. Vehicle wheel [having a central elastic pneumatic cushion]. C. N. Beal, San Francisco.
- 766,961. Hose coupling. C. W. Morris, Peoria, Ill.
- 766,985-768,986. Hose drier [for fire department use]. C. M. Bowman, Lebanon, Pa.
- 767,043. Non collapsible tire [with filling consisting of elastic balls, having spherical air chambers connected by cylindrical perforations, forming one continuous air chamber]. J. T. Dickey and C. D. Derby, Barberton, Ohio.
- 767,120. Rubber tread [for boot heels and such like use; formed of an elastic body and a wear resisting fabric]. P. W. Pratt, Boston.
- 767,208. Fountain pen. S. S. Crocker, Boston, assignor to R. C. Crocker, Clifton, Mass.
- 767,231. Burner and mixer for cautery. J. P. Muller, New York city.
- 767,272. Automatic car discharge valve. W. A. and B. S. H. Harris, assignors to Harris Manufacturing Co., all of Greenville, S. C.
- 767,323. Insulated battery cell [comprising a containing-casing composed of metal with an exterior covering of insulating material susceptible of vulcanization, vulcanized thereto to constitute therewith an integral casing]. V. G. Apple, Dayton, Ohio.
- 767,348. Vehicle tire [solid rubber, having embedded in it a series of pieces of metal, the ends of which engage longitudinal retaining wires at either side of the tire]. B. F. Kenna, assignor of one-fourth to W. Ibeken, both of Philadelphia.

ISSUED AUGUST 16, 1904.

- 767,401. Horseshoe [with rubber cushion]. M. D. Glassbrook, Angola, Ind.
- 767,430. Method of shaping rubber wheel tires. [Refers to outer covers.] F. S. Ornstien, Kensington, Victoria, Australia.
- 767,606. Vehicle tire. [Pneumatic; patent covers special rim.] C. Stein, Akron, Ohio.
- 767,628. Anticontraction steel bar hoofpad. J. W. H. Chrisman, assignor of one-fourth to E. F. Pollard, both of Topeka, Kans.
- 767,756. Elastic tread attachment for horseshoes. J. N. Hornblower, Elizabeth, N. J.
- 767,843. Hose coupling. A. J. Smith, Buena Vista, assignor of fifty-one one hundredths to S. M. Miller and E. R. Harper, White-pine, Colo.
- 767,893. Hose coupling. W. S. Jewell, Oakland, Cal.
- 767,949. Vehicle tire [consisting of a metallic strip next to the felly, with a plurality of leather strips having rubber cushions between]. H.

- Lutz, assignor of two-fifths to B. Harris, both of Hamilton, Ontario.
- 767,966. Hose coupling. F. A. Silvis and F. J. Backer, Millvale borough, Pa.

*Trade Mark.*

- 43,217. Steam packing rings of rubber. The B. F. Goodrich Co., Akron, Ohio. *Essential feature.*—The word SUPERHEAT. Used since July 1, 1904.

ISSUED AUGUST 23, 1904.

- 768,188. Hose binder. J. H. McIntyre and H. Bagshaw, Hartford Conn.
- 768,216. Fountain pen. A. Eberstein, Winthrop, Mass., assignor of one-half to C. Brandt, Boston.
- 768,237. Horseshoe [with cushion pad]. Raymond B. Price, Chicago.
- 768,278. Pneumatic tire [having the inner side of the outer cover composed of a plurality of single strands of gut]. G. H. Hastings, Oporto, Portugal.
- 768,477. Hose repairing lining. J. McKinley, Syracuse, N. Y.
- 768,495. Grip tread for pneumatic tires [consisting of parallel side chains]. H. D. Weed, Canastota, N. Y.
- 768,523. Massage implement. G. Dittmar, Washington, D. C.

ISSUED AUGUST 30, 1904.

- 768,618. Lawn sprinkler. H. F. Neumeyer, Macungie, Pa.
- 768,637. Device for cleaning fluid pens. [Refers to fountain pens.] A. J. Thowless, Newark, N. J.
- 768,684. Pneumatic tire. J. Parmley, Paterson, N. J.
- 768,710. Brush [for use in bathing]. W. Vanderman, Willimantic, Conn.
- 768,779. Fountain pen. H. W. Stone, Brooklyn, N. Y., assignor to A. A. Waterman & Co., New York city.
- 768,850. Tire [of cushion type]. O. L. Leach, Elmwood, R. I.
- 768,891. Machinery for preparing rubber sheets or strips. E. F. Ackerman, Passaic, N. J., assignor to The Okonite Co., Ltd.
- 768,943. Hollow rubber bulb, ball, or analogous article. I. F. Kepler, Akron, Ohio, assignor to The B. F. Goodrich Co.
- 768,944. Hollow rubber article having neck or projections. *Same.*
- 768,945. Rubber-bag body. *Same.*
- 768,981. Rubber type. J. S. Duncan, assignor to Addressograph Co., both of Chicago.
- 768,984. Pump diaphragm. E. George, Jr., New York city.
- 768,985. Finger-hold for penholders. B. B. Goldsmith, New York.
- 769,069. Tire for vehicles. J. H. W. Fitzgerald, Bedford Park, England.

[NOTE.—Printed copies of specifications of United States patents may be ordered from THE INDIA RUBBER WORLD office at 10 cents each, postpaid.]

## GREAT BRITAIN AND IRELAND.

## PATENT SPECIFICATIONS PUBLISHED.

The number given is that assigned to the Patent at the filing of the Application, which in the case of the one listed below was in 1903.

\* Denotes Patents for American Inventions.

[ABSTRACTED IN THE OFFICIAL JOURNAL, JULY 27, 1904.]

- \* 7,583 (1903). Pneumatic tire [protected against puncture by a thickened tread lined with special fabric, and having chambers at the side filled with sponge rubber]. I. Tennant, Springfield, Ohio.
- 7,742 (1903). Electric hair brush [involving a rubber insulating pad]. J. S. Collins, Edinburgh.
- [ABSTRACTED IN THE OFFICIAL JOURNAL, AUGUST 4, 1904.]
- 7,919 (1903). Erasing machine. [An eraser of rubber or other material, to be given motion by a compressed air motor.] C. L. Burdick and S. H. Miles, London.
- \* 7,950 (1903). Boot heel [composed of rubber and wear resisting fabrics]. M. Kennedy, Brookline, Massachusetts.
- \* 7,950 (1903). Hoof pad [for use with a "three quarter" metal shoe]. W. J. Kent, Brooklyn, New York.
- 8,087 (1903). Cushion tire for vehicle wheels. J. N. Bages, Brussels, Belgium.
- 8,189 (1903). Pneumatic tire [protected by a belt of overlapping metal plates between the tread and inner tube]. P. W. Meyer and O. E. Kellermann, Chemnitz, Germany.
- 8,198 (1903). Fountain pen. E. Reisert, Hennef, Germany.
- [ABSTRACTED IN THE OFFICIAL JOURNAL, AUGUST 11, 1904.]
- 8,558 (1903). Pneumatic tire [with anti slipping cover of leather provided with projections]. T. Houben, Verviers, Belgium.



- \*8,583 (1903). Seamless toy balloon. V. F. Feeny, London. (Rubber Balloon Co. of America, Brooklyn, New York.)  
 \*8,749 (1903). Nipple for feeding bottle. W. F. Ware, Philadelphia, Pennsylvania.

[ABSTRACTED IN THE OFFICIAL JOURNAL, AUGUST 17, 1904.]

- \*8,896 (1903). Storm screen for vehicles. J. P. Gordon, Columbus Ohio.  
 8,924 (1903). Flesh rubber [for use in shaving]. S. Mockett, London.  
 \*8,972 (1903). Fountain pen. C. G. Southmayd, West Pullman, Illinois.  
 9,067 (1903). Rotary heel for boots. C. H. Wilkinson, Huddersfield, Yorkshire.  
 9,228 (1903). Pneumatic tire [protected from puncture by a steel plate inside of the tread]. G. Abati, Madrid, Spain.  
 9,243 (1903). Vehicle tire [pneumatic or solid; provided with two tread surfaces to prevent side slipping]. M. Emquem, Paris, France.  
 9,254 (1903). Driving rope for machinery [made of canvas or other textile material, impregnated with Gutta-percha, Balata, or India-rubber]. W. Shaw, trading as R. Lloyd & Co., Birmingham.  
 9,330 (1903). Nursing bottle [having an opening at each end to facilitate cleaning, and provided with rubber stoppers]. H. P. Thompson, London.  
 \*9,331 (1903). Golf ball [composed of a core of wound rubber thread, surrounded by casing of Gutta-percha]. C. E. Boutwood and G. Browning, Hindsdale, Illinois.  
 9,332 (1903). Rotary heel for boots. J. H. Welsenaar, Haarlem, Holland.  
 9,373 (1903). Pneumatic tire [with spring horns for preventing side slip]. W. D. Sainsbury, Dublin.

[ABSTRACTED IN THE OFFICIAL JOURNAL, AUGUST 4, 1904.]

- 9,468 (1903). Removable tread for pneumatic tires to prevent slipping. C. H. Wilkinson, Huddersfield.  
 \*9,484 (1903). Atomizer, for applying medicaments. C. A. Tatum, New York.  
 \*9,594 (1903). Cushioned horseshoe. E. L. Abbott, New York.  
 9,625 (1903). Portable vapor bath. N. Wright, Paris, France.  
 \*9,724 (1903). Hypodermic syringe. H. H. Lake, London. (Parke, Davis & Co., Detroit, Michigan.)  
 \*9,839 (1903). Protective band of leather for rubber tires. L. C. Cummings, Pasadena, California.  
 9,840 (1903). Vehicle wheel, rendered resilient by pneumatic cushions between the rim, and the tire and between the ends of the spokes and the hub. A. Papeux, Paris, France.  
 [ABSTRACTED IN THE OFFICIAL JOURNAL, AUGUST 11, 1904.]  
 9,952 (1903). Pneumatic tire and special method of attaching to the rim. J. Muskett, Pendleton.  
 9,972 (1903). Sole and heel protector. H. J. Bubb and J. H. Cox, Greenock.  
 \*9,997 (1903). Bottle stopper. G. G. Campbell, Rochester, New York.  
 10,014 (1903). Golf ball. C. T. Kingzett, Chislehurst, and F. J. Lovegrove, Sutton.  
 10,059 (1903). Pneumatic tire. [Relates to a method of retaining the cover on the rim]. L. Johnstone, Prestwich.  
 10,076 (1903). Pneumatic tire. T. S. Rose, Uxbridge, and T. N. Harwood, Hounslow.

- 10,092 (1903). Hose coupling. E. Giersberg, Berlin.  
 10,244 (1903). Convertible cloak, stretcher, hammock, bed, and float. P. Haller and J. T. Ellis, London.  
 10,247 (1903). Repairing tires and other rubber articles. A. A. Wade, Leeds.  
 10,292 (1903). Solid endless rubber tire, held in position by flanges. E. Martin, London.  
 10,439 (1903). Elastic stocking. T. Burgum, Canning town, Essex.

#### PATENTS APPLIED FOR—1904.

- [Space is given here only to Applications for Patents on Inventions from the United States.]  
 16,518. L. G. Sloan, London. Fountain pen. (The L. E. Waterman Co., New York.) July 26.  
 17,313. Raymond B. Price, London. Process for devulcanizing rubber waste. (Communicated from the United States.) Aug. 8.  
 17,721. F. C. Brown, London. Fountain pen. (Communicated from the United States.) Aug. 15.  
 17,767. H. M. Mannheimer, St. Louis, Missouri. Fountain pen. Aug. 16.

## GERMAN EMPIRE.

### DESIGN PATENTS GRANTED [GEBRAUCHSMUSTER].

- 228,516 (Class 30*b*). Rubber band having an eye at either end. A. Jacobsburg, Hannover. July 27.  
 228,863 (Cl. 33*c*). Hair curler of rubber with a longitudinal slit, having at the end a knob or an eye. E. R. Godward, Inverengill. July 27.  
 229,007 (Cl. 61*a*). Rubber air pump attached to a Rauchhelm tire, to inflate the tire and an exhaust valve worked by hand to discharge the air. Dräger-werk, H. & B. Dräger, Lübeck. July 27.  
 228,970 (Cl. 77*a*). Swimming device, consisting of two collapsible spheres of rubber connected by a three ended tube having a common mouth piece. M. Ostermaier, Munich. July 27.  
 229,743 (Cl. 44*a*). Wash ball, consisting of stuff provided with soft rubber. H. Kramer, Dresden. Aug. 3.  
 230,114 (Cl. 27*a*). Bellows made of rubber proofed texture. Frau Ludwig Hupfeld, Leipzig. Aug. 10.  
 230,058 (Cl. 30*f*). Pneumatic beater for massage purposes, involving an air cushion. Dr. H. Kastl, Munich. Aug. 10.  
 232,250 (Cl. 30*g*). Collapsible rubber bag to catch spittle or ejections from the stomach. C. Eigendorff, Rixdorf. Aug. 10.  
 230,259 (Cl. 34*g*). Bed clothes holder of two clamps of wire connected by rubber bands. P. Westermann, Hannover. Aug. 10.  
 230,658 (Cl. 63*e*). Annular repair piece for separated tire inner tubes. Hannoversche Gummi-Kamm Compagnie Akt. Ges. Aug. 17.  
 230,734 (Cl. 63*e*). Non slipping detachable protective strip for air tires. *Same*. Aug. 17.  
 229,043 (Cl. 30*g*). Nursing bottle fittings. H. Boelesch, Cologne a/Rh. July 27.  
 229,044 (Cl. 30*g*). Nursing bottle fittings. *Same*. July 27.

### APPLICATIONS FOR PATENTS.

- 24,425 (Class 15*c*). Rubber skin pantograph. C. Mierisch, Leipzig. July 27.  
 30,067 (Cl. 39*b*). Process for producing thin Caoutchouc sheets. A. Blossier, Paris, France. July 27.  
 18,096 (Cl. 63*i*). Elastic wheel tire. R. S. Graham and W. M. Perkins, New York. July 27.

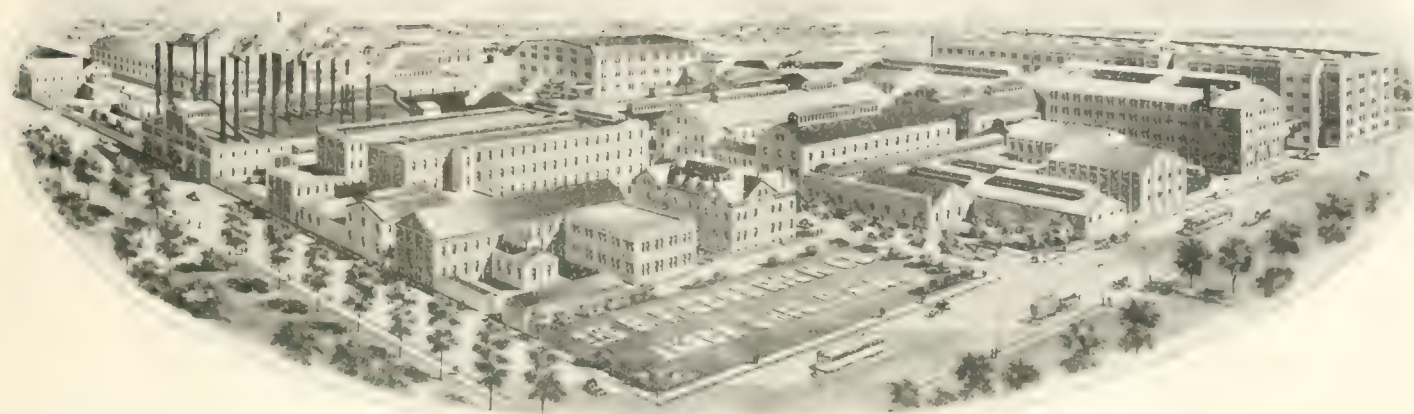
## THE FRENCH REPUBLIC.

### PATENTS ISSUED (WITH DATES OF APPLICATION).

- 340,670 (Feb. 23). Société Franz Clouth Rheinische Gummiwaarenfabrik. Vulcanizing receptacle with screw top cover, provided with an inside press, and operated from the outside.  
 340,796 (Feb. 27). J. A. Mays. Tread for pneumatic tires.  
 340,744 (Feb. 26). Société Duquesne et Dockès. Toys or other objects made of dilated India-rubber, containing several separate compartments.  
 340,886 (March 2). A. J. Grossmann and G. K. Wollaston. Anti slipping device for pneumatic tires.  
 340,924 (Feb. 26). J. Spyker. Pneumatic tires.  
 341,034 (March 8). M. V. B. Rush. Tire for vehicle wheels.  
 341,051 (March 9). Société H. Büssing. Pneumatic tire having a plurality of compartments.  
 341,172 (March 5). R. Bobet. Pneumatic tires with sewed canvas.  
 341,196 (March 11). Société Industrielle des Téléphones. Manufacture of electric conductors, single and multiple, with longitudinal textile cores and spiral metallic windings.  
 341,013 (March 3). E. H. Fayolle. Process for preparing a substance resembling Gutta-percha.  
 340,930 (March 3). R. Robitschek. Materials for bandage or tape dressings and process for their manufacture.  
 341,009 (March 7). R. Appleyard. Golf ball.  
 341,302 (March 18). C. Dalmas. Anti slipping protector for rubber tires.  
 341,595 (March 25). S. J. Lilley and E. P. Bucton. Elastic tire.  
 341,683 (March 26). J. Jouy. Pneumatic collar for horses.  
 341,494 (March 21). J. Mitchell. Pneumatic tire for cycles and vehicles.  
 341,490 (March 23). G. M. Signoret. Pneumatic shoe with multiple air compression chamber.

[NOTE.—Printed copies of specifications of French patents may be obtained from R. Bobet, Ingenieur-Consultant, 16, avenue de Villiers, Paris, at 50 cents each, post-paid.]

**The place where 3000 busy workmen daily  
add to the store of good things in rubber.**



**The home of  
GOODRICH RUBBER GOODS**

**Mechanical Rubber Goods**

**Druggists', Surgeons' and**

**Stationers' Rubber Sundries**

**Automobile Tires**

**Carriage Tires**

**Bicycle Tires**

**Haskell Golf Balls**



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It is noiseless, non-slippery, waterproof, thoroughly sanitary and so durable as to last practically a life time without requiring repairs. It may be laid directly upon existing floor, whether of wood, cement, stone or iron, therefore saving the expense of constructing a concrete floor which is absolutely necessary in all other kinds of tiling.

A perfect floor for business offices, banking rooms, court rooms, vestibules, halls, billiard rooms, smoking rooms, cafes, libraries, churches, hospitals, hotels, bathrooms, kitchens, etc.

Samples, estimates and special designs furnished upon application.

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## GARDEN HOSE FOR 1904.

Rubber Lined Cotton.

Three, Four, Five  
and Seven ply Hose

—ALL COLORS.—

*Write for Samples and Prices.*

The Mechanical Rubber Co.,

Cleveland Seamless  
Tube Hose

Means Larger Sales,

No Complaints

For the Jobber.

CLEVELAND, OHIO.

WARRANTED 2 IN.  
ALUMINUM,  
HIGH PRESSURE,  
OLD GOLD,  
SIAMROCK,  
HIGH GRADE,  
B-4-ANY,  
GOOD ENOUGH,  
BUCKEYE,  
POPULAR,  
WETMORE,  
COMPETITION,  
CLEVELAND,  
EUCLID.

*Mention the India Rubber World when you write.*

## RUBBER INTERESTS IN EUROPE.

LEYLAND AND BIRMINGHAM RUBBER CO., LIMITED.

AT the annual general meeting (Leyland, England, August 17) the accounts presented showed a gross profit for the year ending June 30 of £13,789 os. 2d. This is a considerably lower figure than in former years, which is accounted for by the directors by reason of the exceptionally high cost of raw materials and the impossibility, in the face of competition, of advancing their selling prices proportionately. Otherwise, the company's business was in good condition, the volume of trade having been increased and desirable new markets having been secured. A high degree of efficiency of the plant had been maintained and the cost of considerable improvements charged to revenue. The dividends for the year aggregate 5 per cent. on share issues of £233 557, which would absorb £11,677 17s. After deducting for reserves and depreciations, a balance of £3350 5s. 9d. was carried over, against a balance last year of £6445 11s. 4d. This completes the sixth year of operation of the consolidated companies, the rate of dividend hitherto having been as follows:

1897	1898	1899	1900	1901
6 1/4	6 1/4	7 1/2	7 1/2	8 1/4

The directors reported that, while not discouraged at the present situation, they felt that they would not be justified in looking for any marked improvement in the near future, in view of the abnormal price of raw material still ruling.

## RUBBER PAVING IN LONDON—A CORRECTION.

TO THE EDITOR OF THE INDIA RUBBER WORLD: We observe in your issue of September 1, 1904, that in an article on page 415, relating to rubber paving laid in England and other places, you make the statement that the relaying of the rubber paving at Euston station was carried out by the North British Rubber Co.

This statement is inaccurate, as we beg to inform you that the recent relaying was carried out by this company. We remain, Dear Sir, yours faithfully,

THE INDIA RUBBER, GUTTA PERCHA AND TELEGRAPH WORKS CO., LIMITED.

Silvertown, London, E., September 14, 1904.

## NEW FEATURE OF A GREAT RUSSIAN FACTORY.

TO THE EDITOR OF THE INDIA RUBBER WORLD: Some years ago I wrote for your columns some facts about the Russian-American India-Rubber Co. (St. Petersburg) as gleaned by myself during a visit of nearly two months with them. Since those days I have visited this great establishment several times. Each visit has increased my knowledge of their methods and with increased knowledge comes increased admiration. In an article now under way I will try and give you some definite and correct facts, historical and personal, which may be of interest to your readers.

At this time I write simply to tell you of a new departure made by them, an addition to their efforts to make good men and women, as well as good and faithful workers. You have been told of their nursery, kindergarten, and advanced school; now to these has been added a country home for their operatives. They call it "Erholungs-Haus," or recreation house. It is located in a healthy and handsome estate, about fifty miles from St. Petersburg, called Wolosowa.

The house is handsome in appearance, contains all modern conveniences, both for summer and winter use, and has accommodations for fifty people. Both men and women, who through illness are unable to work and need a rest and a change, are sent to this place at the company's expense, and entertained there for one or two months. During this rest,

while the operative is receiving all the benefits of good air, good food, and hygienic living, his or her pay is curtailed but a little, so that at the end of the period of rest they have not run in debt for the support of those left at home.

A. M. STICKNEY.

Medford, Massachusetts, September 27, 1904.

## GREAT BRITAIN.

THE directors of W. T. Henley's Telegraph Works Co. Limited, have declared an *interim* dividend on the ordinary shares at the rate of 10 per cent. per annum, less income tax, for the half year ending June 30 last, payable September 2. This compares with an *interim* dividend at the rate of 12 per cent. per annum last year.

—The India-Rubber, Gutta-Percha and Telegraph Works Co., Limited, have issued a circular, dated September 1, announcing advances in the prices of rubber goods, varying between 2½ and 5 per cent.

—W. T. Glover & Co., Limited (Manchester, England), are mentioned as having been awarded a contract for supplying their Diatrine paper insulated, lead covered, and leadless and vulcanized rubber cables to the city of Johannesburg, South Africa, to the extent of more than £100,000 [= \$500,000].

## GERMANY.

THE *Gummi-Zeitung* of September 9 reports having learned by wire, at the moment of going to press, that the hard rubber manufacturers of Germany agreed upon the following advance in prices: A temporary advance of 10 per cent. on hard rubber combs, smokers' articles, razor handles, slabs, rods, tubes, technical and electro-technical articles; also divers articles of hard rubber. On pipe mouthpieces the advance is 25 per cent. The advance takes effect immediately.

—The firm of S. Saul (Samuel Saul, proprietor), manufacturers of surgical rubber goods, at Aachen, on September 3 celebrated the twenty-fifth anniversary of one of its foremen. Many presents from the firm, officers and employés, and tokens of honor were received by him. A reception, held at the Dom Hotel, joyful and harmonious in nature, gave evidence of the spirit of good feeling existing between employer and employés.

## CONGO CONSUL TO THE UNITED STATES.

WITH a view to strengthening the commercial and friendly relations between the United States and the Congo, King Leopold has appointed Mr. James Gustavus Whiteley as consul of the Independent Congo State in this country. This is the first consular representative of the Congo appointed in the United States.

Mr. Whiteley is a newspaper man and author and also a banker. He has represented the government of the United States at several international congresses, is an associate of the Institute of International Law, a fellow of the Royal Historical Society of Great Britain, and a corresponding member of the Society of Diplomatic History of France.

It is not necessary to add that Mr. Whiteley is not in sympathy with the criticisms of the government of the Congo Free State, which have been so pronounced of late, especially in England. On the contrary, he has used his pen in defense of the administration of that country under the sovereignty of the king of the Belgians. Mr. Whiteley's address is No. 223 West Lanvale street, Baltimore, Maryland.

IN re Victor Rubber Co.—the old concern, in bankruptcy—several creditors' meetings were held during the past month at Springfield, Ohio, but without any definite agreements being reached in this exceedingly complicated case.



## RUBBER INDUSTRY IN MASSACHUSETTS.

THE eighteenth annual report of statistics of manufactures of Massachusetts, issued by the bureau of statistics of labor of that state, covers the year 1903, in comparison with which figures are given for the preceding year. These reports are not presented as a complete census of Massachusetts industries, but comprise only those establishments from which detailed statements actually have been received. The percentage of factories reporting, however, is so great as apparently to justify the conclusions drawn as to relative industrial conditions in the state, comparing one year with another. Under the head "Rubber and Elastic Goods" details are given in regard to 47 establishments, from which reports have been received annually for some time past, and THE INDIA RUBBER WORLD has summarized, in the table herewith, the figures not only in the current report, but in the preceding returns back to 1900. The result is to show a steady advance in the Massachusetts rubber industry.

The item of "Capital devoted to production" may require a world of explanation. Under the system employed by the Massachusetts bureau of statistics, the term "capital" does not relate to the amount of share capital of a company, but to the actual value of assets as reported by a company, on the same basis, year after year. The amount is variable, therefore, even where no change has been made in the amount actually invested in a business. For instance, the showing of assets includes cash and bills receivable, and value of raw materials and manufactured stock in hand at the date of making the report for any given factory, and these items are especially variable.

The statistics of wages paid do not include the compensation of officers, clerks, or other salaried persons. The "average yearly earnings" are arrived at by dividing the total amount of wages paid by the average number of employés.

It is apparent, from the computations made by the Massachusetts bureau, that the increase in the value of products in rubber industry since 1900 has been much greater than in the total industries in that state. In other words, starting with the value of products of *all* rubber factories in Massachusetts in 1900, as shown by the United States census, and considering the general average of increase of production since, as estimated by the Massachusetts bureau, the *total* rubber goods production in 1903 would have worked out at a little over \$40,000,000. As a matter of fact, however, the 47 rubber factories reporting—and believed to represent 80 per cent. of the total rubber goods production in the state—show products for

1903 of a value exceeding \$48,000,000. On the other hand, the machinery and metal trades make a much smaller showing in actual results for 1903 than the result obtained by estimating by averages.

## A NATIONAL RUBBER CENSUS NEXT YEAR.

THE United States census bureau, which now has become a permanent establishment, instead of having to be reorganized every ten years, is planning a census of manufactures next year, on the idea that the development of the country's industrial resources makes desirable accurate information regarding the leading lines of production oftener than once in ten years. Schedules of inquiries will be mailed, therefore, to all manufacturers in the more important branches, including India-rubber, before January 1, and after that date the mail canvass will be supplemented by the work of special agents in the field. With every schedule is given the pledge of the census bureau that all answers will be held absolutely confidential. No publication will be made of the census reports disclosing the names or operations of individual establishments, the information being used only for the statistical purposes for which it is given. Manufacturers may answer fully the list of inquiries with the assurance that nothing will be divulged.

## RUBBER HORSESHOES AND OTHERS.

"TWO million kegs, containing 100,000,000 horseshoes, are used annually in the United States and Canada, approximately speaking," said S. L. Martin, who represents an iron manufacturing concern of the east. "That was about the number used last year, and all the hue and cry about rubber shoes and automobiles is raised in the face of a constantly increasing sale of horseshoes.

"As a matter of fact, the use of rubber horseshoes, which is confined almost altogether to the large cities, is a help to manufacturers. The sale of old fashioned shoes goes on increasing, and in addition to that the manufacturers have an opportunity to make the steel portion of rubber shoes. All so called rubber shoes have a rim of steel in them, and it is usually of better metal and gives the manufacturer a wider berth for profits than the old fashioned shoe.

"There is a class of people, though, who write essays against rubber horseshoes and decry them in every possible way, but like most persons who oppose progress, they stand in their own light and of course cannot see."—*Louisville Courier-Journal*.

THE following estimate is put out by the Fibre Cushion Horse Shoe Co., Inc. (New York): "There are about 17,000,000 horses in the United States, and the annual consumption of horseshoes in this country is over 96,000,000 sets (384,000,000 horseshoes)."

C. H. HANSON, one of the largest manufacturers of rubber stamps and stencil goods in the country, began business in Chicago in 1865, adding rubber goods at a later date. He has been for a number of years consul for Denmark in Chicago, for a district containing many Danish Americans, and has just been reappointed to this position, in addition to which King Christian of Denmark has conferred upon him the decoration of Knight of Danneborg.

THE RUBBER INDUSTRY IN MASSACHUSETTS.

	1900	1901	1902	1903
Establishments reporting.....	47	47	47	47
Owned by private firms.....	22	20	17	16
Number of partners.....	46	44	37	36
Owned by corporation.....	24	26	29	30
Number of stockholders.....	1,052	1,195	1,260	1,314
Owned by industrial combination.....	1	1	1	1
Capital devoted to production.....	\$14,002,321	\$15,894,533	\$13,817,419	\$12,907,312
Value of stock used.....	\$10,917,756	\$17,491,453	\$19,073,505	\$20,031,456
Value of goods made.....	\$31,123,230	\$32,613,258	\$43,998,474	\$48,597,297
Average number wage earners.....	10,685	11,041	12,065	12,479
Smallest number during year.....	8,662	9,784	9,544	13,005
Largest number during year.....	12,109	12,648	13,095	13,459
Total wages paid.....	\$4,185,961	\$4,910,405	\$5,471,349	\$5,674,595
Average yearly earnings.....	\$411.84	\$444.02	\$448.52	\$454.73
Average days in operation.....	269.96	269.81	284.94	289.39
Proportion of business done, compared with capacity.....	65.32	68.91	74.77	75.83

## NEWS OF THE AMERICAN RUBBER TRADE.

## DAVIDSON RUBBER CO. INCORPORATED.

THE long established druggists' sundries firm, the Davidson Rubber Co. (Boston), have become a corporation, under Massachusetts laws, with \$200,000 capital. The directors are Rhodes Lockwood, president and treasurer; Rhodes G. Lockwood, assistant treasurer; William N. Lockwood, and Francis Gray. The corporation has taken title to the extensive manufacturing property, in the Charlestown district, hitherto occupied by the business. The following statement of condition is supplied in connection with the incorporation of the business, it being understood that the same is based upon a very conservative valuation:

ASSETS.		LIABILITIES.	
Plant.....	\$ 84,000	Capital.....	\$200,000
Merchandise.....	130,000	Bills payable.....	15,100
Bills receivable.....	39,100		
Cash.....	15,000		
Total.....	\$268,100	Total.....	\$268,100

The company owes its name to Dr. Herman E. Davidson (1815-1890), who, although he was the inventor of the Davidson syringe, would never accept any pecuniary benefit from it, holding that it was against the ethics of his profession to engage in the sale of any patented articles used in the practice of medicine. The syringe was perfected by his brother, Charles H. Davidson, who patented it and began its manufacture. In 1860 the latter died, after having sold to his nephew, Hamilton D. Lockwood, his patents, tools, and materials, which were utilized in carrying on the manufacture under the name Davidson Rubber Co. In 1868 Mr. Lockwood took into partnership his brother Rhodes Lockwood, and died in 1875, leaving the latter sole proprietor of the business, but on January 1, 1876 another brother, Philip C. Lockwood became interested, under the firm name R. & P. C. Lockwood. Nineteen years later Philip retired, selling his interest to his brother Rhodes, who took his son William N. into partnership with him, another son, Rhodes G., being admitted to the firm later. The firm name Rhodes Lockwood & Co. was adopted, for the ownership of the property, though during the whole time the manufacturing and selling business has been conducted under the name of the Davidson Rubber Co. Now that a corporation has been formed, it has taken title to the property, as above stated. It might be mentioned that Rhodes Lockwood's first connection with the business really was in 1858, when for awhile he was employed in the office of his uncle Charles H. Davidson.

The production of this company has been extended until it embraces a wide line of druggists', surgical, and stationers' goods, in soft and hard rubber, for which a high reputation has been maintained. It is stated that nine-tenths of the crude rubber bought for consumption by this company is of the finest Pará grades.

## HARRISON-WILLIAMS RUBBER CO.

THE Williams Rubber Co. (Los Angeles, California), incorporated in April, 1903, has changed its name to The Harrison-Williams Rubber Co. H. O. Harrison, who has been connected with the business from the beginning, becomes president of the company, with T. J. Williams vice president, and W. G. Williams secretary and treasurer. They are large dealers in tires, handling the Goodrich, Diamond, G & J, Fisk, and Dunlop makes, in southern California and Arizona, and maintaining an extensive tire repair shop, with vulcanizers, molds, etc., to enable

them to repair any of the leading brands of tires. In this respect, they probably have the most complete shop in the United States. The company also handle mechanical rubber goods to a certain extent.

## BOWERS RUBBER CO. PLANNING NEW FACTORY.

THE Bowers Rubber Co. (San Francisco), manufacturers of mechanical rubber goods, have purchased a tract of 12 acres at the junction of the Sacramento and San Joaquin rivers, near Oakland, California, on which they purpose building a new factory. It is stated to be a most desirable site, and building plans are being prepared.

## THE IMPERIAL RUBBER CO. (BEACH CITY, OHIO.)

THIS new company, succeeding two older concerns, as reported recently in THE INDIA RUBBER WORLD, have just completed a new building for office use and stock room, and are in position to engage actively in the manufacture of seamless rubber gloves—red, white, and black, of all sizes; seamless water bottles, syringes, ice bags, finger cots, face masks, etc. They are also prepared to make vehicle tires, besides continuing the manufacture of hard rubber harness mountings, which were a specialty of the Canton Hard Rubber Co., one of the concerns succeeded by the new company.

## REMOVAL OF MULCONROY &amp; CO.

MULCONROY CO., INCORPORATED (Philadelphia), on October 1 removed from Market street to No. 722 Arch street. Prior to removal they had a clearance sale of their retail sundries stock, and hereafter will devote their attention solely to mechanical rubber goods and the manufacture of their extensive line of piston packings.

## TRIBUTE OF EMPLOYEES TO MR. CONVERSE.

A HANDSOME bronze tablet in memory of the late Hon. Elisha S. Converse, founder of the Boston Rubber Shoe Co., at Malden, Massachusetts, has been placed in the office of the company's Edgeworth factory. The money for the tablet was raised by subscription among the employés in all branches of the factories. The tablet is inscribed: "This tablet is erected in the memory of Elisha S. Converse by the employés of Factory 1 of the Boston Rubber Shoe Company. June, 1904." W. H. Johnson, E. A. Rhoades, and A. Copelin, overseers in the factory, were the committee in charge of its installation.

## RUBBER GOODS AT CANADIAN FAIRS.

THE Gutta-Percha and Rubber Manufacturing Co. of Toronto, Limited, was well represented by displays of their products at two recent exhibitions of importance—the Canadian National Exhibition, at Toronto, and the Dominion Exposition, held this year at Winnipeg. The latter town, which thirty years ago was only a trading station of the Hudson Bay Co., has now a population of 75,000, and the fair there was a large one and liberally attended. The rubber exhibit referred to was installed by The Winnipeg Rubber Co., Limited, who are the Western representatives of the Toronto company above named. The display received one of the two gold medals offered for premium honors in the Winnipeg Manufactures building. The district of which Winnipeg is the center is rapidly filling up with settlers from the United States, who last year numbered 49,000. The wheat crop this year is expected to yield 75,000,000 bushels, and the region already affords an important market for manufactures.



## MR. HIGHT LEAVES THE RUBBER TRADE.

THE following announcement is made by the American Hard Rubber Co. (New York), in relation to a member of their office staff who possesses a host of friends in the trade:

TO THE TRADE: We regret to announce that Mr. Frank B. Hight, who has been identified with us in the hard rubber business for the past 25 years, has decided to sever his connection with this company on this date. Mr. Hight has associated himself with Mr. Percy Gardner, to engage in the manufacture of fancy narrow fabrics and feather stitch braid, and he leaves us with our sincere wishes for his success and continued prosperity. Yours very truly, AMERICAN HARD RUBBER CO.

New York, September 1, 1904.

Mr. Hight has become a member of the firm Gardner & Hight Co., No. 447 Broadway, New York, with mills at Providence, Rhode Island.

## THE RUBBER INDUSTRY IN TORONTO.

SAYS the *Toronto Globe*: "One of the most striking evidences of industrial expansion in Toronto is provided by the Gutta Percha and Rubber Manufacturing Co. Ten years ago this company gave employment to 75 artisans; to-day the number on their pay roll is nearly 600—eight times as many. To fill the demand for the products of the works it has been necessary to add considerably to the factory every year, until now the company own a number of mammoth shops in Parkdale, covering several acres. Not only are the company doing an immense trade with all parts of the Dominion, but they are exporting large quantities to the British Isles, Australia, New Zealand, South Africa, and the East."

## AFFAIRS OF THE GUM-CARBO CO.

THE Gum-Carbo Co., incorporated in Texas in 1902 to manufacture from petroleum, combined with certain other materials, a substitute for rubber, suitable especially for use in hard rubber goods, for insulation work, and for paints and varnishes [See THE INDIA RUBBER WORLD, April 1, 1902—page 230] have been at work, since April last, erecting a factory plant near Gulfport, Mississippi—a point on the gulf of Mexico not far from New Orleans. At this time an office building, distilling house, and a three story main building 125 × 175 feet are nearly completed. On August 17 fire in the town of Gulfport destroyed the temporary office of the company there, causing the loss of their correspondence files, mailing lists, and samples of their products, which will cause some inconvenience for a limited time. Secretary R. E. Humphreys advises THE INDIA RUBBER WORLD:

"Our material vulcanizes with or without any rubber in compounds; in paint it is superior to any of the bitumens, and also lends superior qualities to roofing over bitumen mixtures. Flexibility is characteristic, but as yet no considerable amount of elasticity has been developed in our material. Not having any product to market, we have not enlisted the interest of rubbermen. We know they will take some of our material, probably more than we can spare for some time. We must turn out some paints and varnishes, and such goods as will probably pay us better than selling our crude uncompounded."

## Y. M. C. A. WORK IN RUBBER FACTORIES.

THE Young Men's Christian Association of Trenton, New Jersey, endeavors to keep in touch with the men employed in the factories of that city by means of a committee representing the association in each establishment. The committees in the various rubber factories are as follows:

Crescent Belting and Packing Co.=Thomas Keating, Charles Wilking, H. C. Everingham.

Empire Rubber Manufacturing Co.=Arthur Scarborough, William D. Van Horn, J. Oliver Smith.

Grieb Rubber Co.=Robert Marshall.

Hamilton Rubber Manufacturing Co.=Jesse Sooy, Wilbur Cain, Edward Robbins, Uriah Pittman.

Home Rubber Co.=Percy Gifford, Charles E. Troupe, John E. Mullen.

Joseph Stokes Rubber Co.=Paul Gunkel, H. S. Gray, Dunbar Phillips.

Trenton Rubber Manufacturing Co.=E. O. Titus, G. H. G. Chamberlain, John Evans.

United and Globe Rubber Manufacturing Cos.=Malcolm Salter, Charles Brady.

Vulcanized Rubber Co. (Morrisville)=Everett Townsend, Bert Wilkes, A. R. Ellis, Harry Burns.

Whitehead Brothers Rubber Co.=Lyman L. Titus, John Brink, T. W. Cubberley, J. C. Coudle.

## THE MARCH UPON CLAREMONT.

THE Woonsocket *Reporter* on September 15 contained a report from Bristol, Rhode Island, stating: "A large number of skilled rubber workers have left Bristol for new employment in a rubber factory at Claremont, N. H."

The Manchester *Union* of the same date contained a report from Claremont to the effect that the town had been overrun with foreigners, who had arrived there from Bristol, to go to work in the rubber department of the Maynard shoe factory. They claimed that a representative of Mr. Maynard had visited Bristol and given out that 300 rubber workers were required. The representative referred to told the *Union* reporter that he had contracted for 15 workers, of whom 13 had arrived and were then in the factory; the others had come without suggestion from him. Most of the new arrivals were without money, and had to be assisted back to Bristol.

## NEW YORK STOCK EXCHANGE TRANSACTIONS.

## UNITED States Rubber Co.:

DATES.	COMMON.			PREFERRED.		
	Sales.	High.	Low.	Sales.	High.	Low.
Week ending July 23	10,195	19 <sup>7</sup> / <sub>8</sub>	18	3,277	78 <sup>1</sup> / <sub>2</sub>	73 <sup>1</sup> / <sub>4</sub>
Week ending July 30	3,755	19 <sup>7</sup> / <sub>8</sub>	19	1,940	76	73 <sup>1</sup> / <sub>2</sub>
Week ending Aug. 6	1,220	19 <sup>1</sup> / <sub>2</sub>	19 <sup>1</sup> / <sub>2</sub>	420	75 <sup>3</sup> / <sub>4</sub>	74 <sup>1</sup> / <sub>4</sub>
Week ending Aug. 13	1,513	19 <sup>1</sup> / <sub>4</sub>	19 <sup>1</sup> / <sub>4</sub>	2,623	75 <sup>1</sup> / <sub>2</sub>	74 <sup>1</sup> / <sub>8</sub>
Week ending Aug. 20	1,770	19 <sup>1</sup> / <sub>2</sub>	18 <sup>3</sup> / <sub>4</sub>	679	76	75 <sup>1</sup> / <sub>8</sub>
Week ending Aug. 27	1,300	19 <sup>3</sup> / <sub>8</sub>	18 <sup>3</sup> / <sub>4</sub>	1,600	76	75 <sup>1</sup> / <sub>4</sub>
Week ending Sept. 3	1,290	19 <sup>3</sup> / <sub>8</sub>	18 <sup>3</sup> / <sub>8</sub>	1,181	75 <sup>3</sup> / <sub>4</sub>	73 <sup>7</sup> / <sub>8</sub>
Week ending Sept. 10	2,195	19 <sup>1</sup> / <sub>2</sub>	18 <sup>3</sup> / <sub>4</sub>	655	75	74
Week ending Sept. 17	8,245	2 <sup>3</sup> / <sub>4</sub>	19 <sup>1</sup> / <sub>2</sub>	2,136	75 <sup>1</sup> / <sub>4</sub>	74
Week ending Sept. 24	2,040	20	19 <sup>1</sup> / <sub>8</sub>	960	74 <sup>3</sup> / <sub>4</sub>	73 <sup>1</sup> / <sub>2</sub>

## RUBBER Goods Manufacturing Co.:

DATES.	COMMON.			PREFERRED.		
	Sales.	High.	Low.	Sales.	High.	Low.
Week ending July 23	3,800	19 <sup>1</sup> / <sub>8</sub>	17 <sup>7</sup> / <sub>8</sub>	875	79 <sup>1</sup> / <sub>2</sub>	78 <sup>1</sup> / <sub>8</sub>
Week ending July 30	825	18 <sup>1</sup> / <sub>2</sub>	18	385	79	78 <sup>1</sup> / <sub>2</sub>
Week ending Aug. 6	50	18 <sup>1</sup> / <sub>2</sub>	18 <sup>1</sup> / <sub>2</sub>	100	79	79
Week ending Aug. 13	760	18	17	200	79 <sup>1</sup> / <sub>2</sub>	79 <sup>1</sup> / <sub>2</sub>
Week ending Aug. 20	1,430	19	17 <sup>1</sup> / <sub>2</sub>	750	81	79 <sup>1</sup> / <sub>2</sub>
Week ending Aug. 27	900	18 <sup>1</sup> / <sub>4</sub>	18	100	81	81
Week ending Sept. 3	300	18	17 <sup>1</sup> / <sub>8</sub>	780	82	81
Week ending Sept. 10	2,465	19 <sup>1</sup> / <sub>4</sub>	18 <sup>1</sup> / <sub>4</sub>	165	81	81
Week ending Sept. 17	10,915	20 <sup>1</sup> / <sub>2</sub>	19 <sup>3</sup> / <sub>8</sub>	20	82 <sup>1</sup> / <sub>2</sub>	82
Week ending Sept. 24	1,830	19 <sup>1</sup> / <sub>4</sub>	19	35	82 <sup>3</sup> / <sub>8</sub>	82 <sup>1</sup> / <sub>8</sub>

## AFFAIRS OF GEORGE WATKINSON &amp; CO. (PHILADELPHIA).

THE affairs of George Watkinson & Co. (Philadelphia), in bankruptcy, appear to have remained at about the same stage since the last report on the subject in THE INDIA RUBBER WORLD some months ago. After the meeting of creditors in the early part of July, when the status of the numerous claims was made known to the trustees of the estate—the Provident Life and Trust Co.—the latter took exception to the payment of several of the claims, on the ground that they were not *bona fide*. Their contentions were set forth in a petition addressed to the referee, Richard Hunter. After its receipt, for some

time no meetings were called, it being thought advisable not to convene a session of creditors until the objections of the trustees were thoroughly gone over and an opinion given as to whether these objections should be sustained. In the meantime, no dividends have been paid and no action taken for the benefit of the creditors. A meeting has now been called for the first week in October, when it is thought something definite may be done.

#### THE "OPEN SHOP" IN CHICAGO.

AFTER having been shut down for two weeks the Chicago factories of the Mechanical Rubber Co. and Morgan & Wright resumed work on September 12, without a renewal of the agreement with the Rubber Workers' Union which expired on August 31. On the expiration of the old agreement the two concerns declined to enter into further contract relations with the union, claiming that the union had permitted its members to go on strike four times during the life of the agreement. After the shutdown the companies wrote to their former employés, offering to reinstate them as individuals, but not as members of the union. The first answer to this course was the declining of a strike by the union, but finally enough of the former employés applied for work to enable the factories to be reopened at the time stated. Meanwhile extensive repairs had been made at the factories.

#### A PLEASANT OUTING OF RUBBER MEN.

THE foremen and clerks and executive staff of the Passaic factory of the New York Belting and Packing Co., Limited, had their seventh annual clambake, on September 3, at Donnelly's Grove, College Point, Long Island, and it proved a most enjoyable occasion for the 150 or more, including guests, who participated. The party arrived at College Point about 11 A. M. and left for the return home at 6 P. M. A chowder breakfast was served upon their arrival at the grove, and the clambake was ready at 2 o'clock. Breakfast was followed by a baseball game between a team from the hose room and another representing the rest of the factory; five innings were played and the factory team won by a score of 9 to 8. Other sports during the day were: One hundred yard dash, sack race, putting the shot, and throwing the hammer. A number of the party went bathing. Among those present were Mayor Greenlie, of Passaic; City Attorney Sullivan, Collector A. T. Zabriskie, and Councilman James King, and Robert G. Bremmer, editor of the Passaic *Herald*. The latter experienced, while bathing, what is asserted to be his second narrow escape from drowning this year. Everybody in the party wore a silk badge on which was mounted a photograph of E. J. Coughlin, the general factory manager, as an evidence of the high esteem in which he is held by the company's employés. The committees in charge of the outing were liberally complimented upon its success. They were:

*On Arrangements.*—E. J. Coughlin and I. P. Blackman, *ex-officio*; Joseph Spitz, chairman; E. C. Gruehl, treasurer; R. Robertson, J. King, F. Abele, G. McNiff.

*On Games.*—F. Abele, chairman; Richard Banks, William Troutwelle;

The Editor of THE INDIA RUBBER WORLD regrets that pressing business at a distance made impossible his acceptance of a complimentary invitation to the clambake.

#### NEW INCORPORATIONS.

DAVIDSON Rubber Co. (Boston), August 31, 1904, under Massachusetts laws; capital, \$200,000. Further details in another column.

=The Columbia Rubber Co., July 12, 1904, under the laws of the District of Columbia; capital authorized, \$500,000. Incorporators: William McDonald, Simon Hamburger, E. W. McCormick, E. M. Freeman, B. E. T. Kretschmann. A Washing-

ton corporation agency advises THE INDIA RUBBER WORLD: "The Columbia Rubber Co. does not expect to do any business, the parties interested having discontinued soon after securing the charter."

=The Pacific Rubber Stamp Co. (Los Angeles), August 22, 1904, under California laws; capital, \$10,000. Incorporators: C. D. Hudson, George S. Greene, F. B. Kitts, O. L. Olshausen, and J. M. Hutchinson.

#### TRADE NEWS NOTES.

THE Boston Belting Co. announce that they have concluded arrangements with the Jewell Belting Co. (Nos. 175-177 Lake street, Chicago), to act as their exclusive Chicago selling agents. The Jewell Belting Co. were established in 1848 as manufacturers of leather belting, their main office now being at Hartford, Connecticut. They are also large handlers of rubber belting, of which line their Chicago store is an important distributing center. They will carry a full line of the Boston Belting Co.'s mechanical rubber goods.

=A further meeting of the manufacturers of mechanical goods, whose first step toward the organization of an association was mentioned in the last INDIA RUBBER WORLD, is scheduled for the evening of October 6, at the Waldorf-Astoria, New York.

=The managers of branch stores of the United States Rubber Co., who meet for consultation twice a year, held their fall conference about the middle of September in St. Louis. Not only was this a convenient point, but the managers had an opportunity to see the World's Fair.

=The La Crosse Rubber Mills Co. (La Crosse, Wisconsin), have ordered considerable new machinery, with a view to extending their plant and taking on the manufacture of tires and some mechanical rubber goods. It is understood that for the present no enlargement of the factory building is intended.

=Fisk Rubber Co. (Chicopee Falls, Massachusetts) have decided to establish at Chicago a Western department, in charge of Frank C. Riggs, to handle their trade west of Buffalo. The Chicago local branch, at No. 54 State street, will remain in charge of Ben Pratt, as manager.

=Boston Woven Hose and Rubber Co. have been awarded a contract for supplying the city of Cleveland, Ohio, with 5000 feet of 2½ inch rubber lined cotton fire hose, for which bids were opened on August 26.

=The foundry of A. Adamson, at Akron, Ohio, has lately closed a contract with the La Crosse Rubber Mills Co. (La Crosse, Wis.), including six hydraulic presses, one being a 44" X 44" multiple; also, a 4" tubing machine. The Adamson foundry is very busy in all departments, with the outlook good for business throughout the winter.

=The foremen of the various departments of the rubber factory of L. Candee & Co. (New Haven, Connecticut), to the number of 51, dined at Savin Rock on the evening of September 10, having as guests of honor Messrs. J. H. Pearce and G. E. Bailey, respectively superintendent of the factory and treasurer of the company. The occasion was a thoroughly enjoyable one.

=The Joseph Banigan Rubber Co.'s Buffalo agency will carry a stock of "Banigan" and "Woonasquatucket" goods at Mansfield, Ohio, during the sizing season, in order that more prompt deliveries may be made in that territory, when the season is on, that it is possible to make from Buffalo. The stock will be in charge of Charles A. Eldridge, at No. 217 North Main street, Mansfield.

=The Preston Hose and Rubber Co. are removing their factory equipment, which has not been active for some time past, from Marlboro to Woodville, Massachusetts.



=In the United States court at Denver, Colorado, Judge Hallett recently dismissed a suit brought by the United States Rubber Co. to enforce the collection of a claim for \$40,000 against a customer, on the ground that the plaintiff company had failed to comply with the Colorado statute requiring corporations formed under the laws of other states to pay a corporation tax there and to name a local agent to sue or be sued.

=Fabric Fire Hose Co. (New York) have been distributing to their friends in the trade a handsome souvenir in the shape of a leather card case, embossed with the company's trade mark.

=The regular quarterly dividend of  $1\frac{1}{2}$  per cent. on the preferred shares of the American Chicle Co. is payable on October 1. The regular monthly dividend of 1 per cent. on the common shares was paid on September 20.

=W. H. Salisbury & Co. (No. 107 Madison street, Chicago), so long engaged in the distribution of mechanical rubber goods, have taken the account of the Pennsylvania Rubber Co. (Jeannette, Pa.)

=Mr. H. M. Sadler, Jr., formerly general manager of the United States Rubber Co., and for some time past engaged in the banking business in Wall street, it is reported, is about to become connected with the Banner Rubber Co. (St. Louis).

=Mr. R. M. Howison, of R. M. Howison & Co., Snow Hill, London, European agents for the Pennsylvania Rubber Co. (Jeannette, Pa.), was a visitor to the United States during the latter half of September.

=C. W. Barrett, who has for some time represented the Boston Woven Hose and Rubber Co. in the southwest, will hereafter represent them in St. Louis and adjoining territory, with headquarters at St. Louis.

=Labor day (September 5) was celebrated at Lambertville, New Jersey, with a carnival in which the whole city took part, instead of the celebration being confined to a demonstration by organized labor. There was an oration by the Hon. Francis B. Lee, of Trenton, on the industrial progress of the city, and a procession through streets decorated in gala attire. Prominent features of the procession were floats representing the Lambertville Rubber Co. and the New Jersey Rubber Co.

=The New York branch of the Tennant Auto-Tire Co. (Springfield, Ohio) reports having equipped to date over 800 automobiles with the Tennant puncture proof tires. The company expect next year to turn out a full line of tires built on the same principle for motor cycles.

#### PERSONAL MENTION.

HERR ARTHUR KRAACK, manager of the Russian-American India-Rubber Co. (St. Petersburg), was a recent visitor to the World's Fair at St. Louis, and while in the States favored the offices of THE INDIA RUBBER WORLD with a call.

=Recent visitors to THE INDIA RUBBER WORLD office have been Mr. Francis Crosbie Roles, editor of the *Times of Ceylon* (Colombo), who came to America as official visitor to the Ceylon Court at the World's Fair, and Mr. M. Kelway Bamber, government chemist for Ceylon, who also was on an official mission to the fair.

=Mr. Isidor Frankenburg, the head of the important rubber manufacturing firm of I. Frankenburg & Sons, Limited, of Manchester, England, and a member of the Society of Chemical Industry, was in attendance at the society's annual meeting in New York, which was begun on September 7.—Mr. Walter F. Reid, of Surrey, a consulting chemist and the inventor of "Velvrl" and some other compounds of interest to the rubber trade, was also in attendance, the British visitors in all numbering about a hundred.

=Mr. George H. Hood, of Boston, so long a prominent

figure in the rubber industry, has returned from an automobile tour of Europe, which consumed most of the summer, and extended through Great Britain, France, Switzerland, and Belgium.

=Mr. Ephraim L. Corning, a director in the Boston Rubber Shoe Co., who for a number of years past has resided in Switzerland, is making one of his periodical visits to the United States.

=Mr. Isaac B. Markey, secretary of the Eureka Fire Hose Co. (New York), whose illness was reported in the last INDIA RUBBER WORLD, has since recovered sufficiently to allow him to return to his office.

=Mr. James Bennett Forsyth, of the Boston Belting Co., has had printed a strong argument for more liberal treatment by the government of the merchant marine, in a little pamphlet bearing on its cover a picture of the United States flag, with the inscription: "The flag that is about to become extinct upon the ocean highways of the world." The contents are made of pointed paragraphs of which this is a specimen:

The delegates to the Pan American Congress in this country had to travel by way of Europe to reach America, and we are thousands of miles nearer in a direct line.

Of what use is a Pan American Congress without ships?

=It is reported that the executors of the estate of the late Elisha S. Converse have discovered personal property to the amount of \$1,500,000, the existence of which was not before suspected by them. It does not appear that the property was concealed in any way, but the executors learned of it only by going over the details of the estate.

=Mr. Harold P. Fuller, of Boston, one of most popular of the young men in the employ of the New York, New Haven and Hartford Railroad Co., has given up railroading to enter the rubber business, having accepted a position as salesman for the products of the E. H. Clapp Rubber Co.

#### A VISITOR FROM SILVERTOWN.

MR. ROBERT KAYE GRAY, managing director of the India-Rubber, Gutta Percha, and Telegraphs Works Co., Limited (Silvertown, London), was in attendance last month at the International Electrical Congress, at St. Louis, as one of the delegates from The Institution of Electrical Engineers of Great

Britain, of which distinguished body he is the president. Mr. Gray has been closely identified with the submarine telegraph from the days when it passed from the stage of experiment to that of commercial and engineering development. His father, Mr. Matthew Gray (1821-1903), was long the managing director of the great Silvertown cable works, and it was here that the son received a thorough training in everything relating to submarine telegraphy, and became identified with the engineering side of the art. He was a pupil of Sir Charles Bright, with whom he went out in 1870 to lay the first West Indies cable. At this time, in addition to the office which he fills in the Silvertown company, Mr. Gray is chairman of the Spanish National Submarine Cable Co. and a director in several other companies owning and operating submarine cables. He has been president of the Electrical Engineers since March, 1903. The portrait presented herewith is used by the courtesy of the *Electrical World and Engineer*, of New York.



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## NEW TRADE PUBLICATIONS.

**THE MERCHANTS RUBBER CO., LIMITED** (Berlin, Ontario), a new company, have issued their first catalogue and price list of Rubber Boots and Shoes, comprising an extensive line, which is satisfactorily illustrated and described. Prices are given. [3 1/2" x 5 7/8". 64 pages.]

**THE DIAMOND RUBBER CO.** (Akron Ohio), issue a booklet of tasteful appearance, entitled "My Sentiments," being "a few pointed remarks" regarding their "Indian Red" and "Silver Leaf" brands of Steam Packing, emphasizing the durability of the same. [3 3/8" x 6". 12 pages.]—Also 4-page circulars each on Pump Valves and Mats and Matting.

**THE B. F. GOODRICH CO.** (Akron, Ohio) issue a strikingly novel brochure, described on the cover as a "Primer," being "A rhyme book on y<sup>e</sup> letters of y<sup>e</sup> Alphabet, containing also certain short Truths." The literary style is a modification of that of the "New England Primer" of the seventeenth century, while the illustrations are fully 213 years in advance of the art of that old classic. On the first page, under a suitable picture, we learn:

A is for Ape—  
A dissatisfied monk;  
If he rode *Palmer Tires*  
He'd have much more spunk.

And on every succeeding page is a similar combination of wit, wisdom—and tire truths. [6" x 10 3/4". 26 pages.]

**FABRIC FIRE HOSE CO.** (New York) issue a brochure entitled "Fire Engineers' Hand Book," including an account of fire hose weaving, the details of the wax and gum treatment to which this company's hose is subjected, tables of work done by and power required for fire streams and other like statistics, and useful hints on "First aid to the injured" in fire fighting forces. [7" x 6". 46 pages.]

**JENKINS BROTHERS** (New York) issue a booklet, "Valve Troubles and How to Avoid Them," which seems likely to prove of much value to engineers and steam users. First are summarized the difficulties most commonly encountered in the installation and use of valves, with suggestions for their remedy. The remaining pages are devoted to descriptions of the Jenkins valves, now in such wide use that it is asserted that there are comparatively few steam plants in the United States where one or another of the various types is not to be found. [3 1/2" x 6 3/8". 24 pages.]

## ALSO RECEIVED.

**MASON Regulator Co., Boston**—Price List of Mason Reducing Valve Parts. July 15, 1904. 8 pages.

**Keasbey & Mattison Co., Ambler, Pennsylv.**—Notes on Asbestos Packings and Gaskets. 36 pages.

**A. G. Spalding & Brothers, New York.**—Catalogue of Fall and Winter Sports. [With illustrations of a number of articles comprising rubber.] 96 pages.

**A. E. Gallien, No. 12 West Thirty third street, New York.**—Samson Leather Tire. 12 pages.

**Chicago Fire Hose Co., Chicago**—Fire Hose and Apparatus. [The company market the fire hose product of the Cleveland works of the Mechanical Rubber Co.] 24 pages.

**Fibre Cushion Horse Shoe Co., Inc., New York.**—[Prospectus of company.] 16 pages.

**LINEN HOSE IN THEATERS.**—The board of fire commissioners of Newark, New Jersey, have ordered that rubber lined hose be used in all theaters in that city, instead of linen hose, as heretofore. Much complaint has resulted, it being contended that linen hose meets every necessary requirement; that it is lighter in weight, and therefore more easily handled in case of a fire; that it can be stored in less space than rubber lined hose, and requires less care to keep it in good condition; and that rubber lined hose is more apt to deteriorate, in the warm temperature to which hose is exposed in theaters. The chief of the fire department of New York city, when called upon for an expression, wrote: "A large portion of the hose connected to standpipes in this city is linen hose, capable of standing a pressure of 300 pounds to the square inch, and which meets the requirements of this department." The Newark board, however, refused to rescind its order. Rubber lined hose has been used exclusively in the local fire department for years.

## THE VOORHEES RUBBER CO. AT ST. LOUIS.

**A**N interesting exhibit in Machinery Hall, at the St. Louis World's Fair, is that of the Voorhees Rubber Manufacturing Co. (Jersey City, New Jersey). There is on exhibition in this display a full assortment of the mechanical rubber goods products of the Voorhees factory, including belting, hose, packings, and matting, all of which are arranged to make a most favorable impression. An unusual feature of the display is an installation of miniature rubber machinery, which has appealed to the interest of many visitors to the fair who have never seen any of the processes of working rubber. There are included, for example, a tubing machine, which turns out white and red tubing; a mill for warming up stock; a calender for making hose coverings; and a press with a die for turning out ink well stands, which are given away as souvenirs. The illustration herewith is based upon a photograph of the Voorhees exhibit, which is one of the most interesting—though not the largest—in the department of rubber goods at the fair. It is located in Block 34, Aisle 6, and is in charge of Mr. C. P. Capen, of the Capen Belting and Rubber Co. (St. Louis), who is the local representative of the Voorhees company.



VOORHEES RUBBER MANUFACTURING CO.'S DISPLAY.



## WIRELESS TELEGRAPHY ON THE AMAZON.

THE Amazon Wireless Telegraph and Telephone Co., with \$1,000,000 capital authorized, filed incorporation papers in the office of the secretary of state of Maine, January 26, 1904. The expressed object is to establish a wireless service between Pará and Manáos. The incorporators were J. Berry (president) and Lewis A. Burleigh (treasurer), both of Augusta, Maine; A. M. French, Winthrop, Maine; Charles R. Hebard, Brooklyn, New York; and Frederick Stewart, Montclair, New Jersey.

The *South American Journal* (London, August 13) says: "Experiments with a wireless telegraph system which have been quietly carried on between Manáos and Iquitos during the past few months have shown such satisfactory results that the cable company has bought the right to use the system between Pará and Manáos, and the manager of the Manáos office is now in Pará making final arrangements for installing the system. No other improvement is so important to the commercial interests of the Amazon valley as the instalment of a reliable telegraph service between Pará, Manáos, and upriver points."

## SHOES AND RUBBERS IN WHITE.

WHITE shoes have never been so much worn as they are this summer. All sorts and conditions of men, women and children, to say nothing of infants, have fallen in line on the white shoe. Boot makers and boot sellers say that they are doing a driving business in both canvas and doeskin shoes.

Just why the white shoe is so popular is hard to say. In canvas it is undeniably cool and easy on the feet, but in anything it is difficult to keep clean and looks out of place in city streets. Then it makes the foot look large, as does any shoe of light hue. But it is here to stay until the frost runs it to cover, if appearances count for anything.

One fashion always calls for another, so the white shoe has created a decided demand for white rubbers. These are easily obtainable at any large shoe store and cost little more than ordinary black rubbers. There was a time when one pair of black galoshes sufficed even the best dressed; but feet, as well as heads and hearts, have grown complex, and now the well groomed grownup or child must have white rubbers for white shoes, tan rubbers for tan shoes, gray rubbers for gray shoes

and black rubbers for black shoes.

Who knows? In a little while rubbers of rainbow hue may appear.—*New York Sun*.

## THE HARD RUBBER BOWLING BALL.

THE suggestion of the use of hard rubber for bowling balls is not entirely new. In THE INDIA RUBBER WORLD of March 15, 1892, the following paragraph appeared, on page 184:

"Hard rubber balls for use in bowling alleys are little known but have been used with good success. The surface is of hard rubber with combination filling. They are expensive and for ordinary use are no better than *lignum vitae*. In other words the ordinary flooring of an alley does not call for a high order of ball. The science of bowling has within the past few years received a decided impetus among the youth of the country, and the growing tastes of the wealthy class are calling for a better standard of alley. It is now proposed to build up-town in New York city, an alley of slate, and on this hard rubber balls will be used. One can almost imagine he was in dreamland or if he be not ethereal, on a greased slide, when he can send a highly polished rubber ball down the smooth plated surface of a bowling alley perfect in its level towards a goal bringing results entirely dependent and without variation upon his skill."

COULD NOT GET RUBBER NAILS.—A carpenter in Baltimore, whom a citizen sought to enjoin from working in his shop at 7 A. M. because it disturbed the latter's slumbers, filed a humorous answer. It says that as the defendant has not been able up to the present time to obtain rubber nails, hammers or rubber heels for shoes for his emloyés that would prove satisfactory in working, there must be some slight noise accompanying the mechanical operation of driving nails, but not sufficient to disturb the nerves of a person in ordinary health and not supersensitive.

MR. N. H. WITT, of the important Manáos firm of Witt & Co., rubber merchants, arrived in New York recently via Europe, and will leave for his home by the next steamer for the Amazon.

—Mr. Henry H. Holland, manager of the European depot of the United States Rubber Co. (London), has been for some weeks on a visit to the company's headquarters on this side of the Atlantic, incidental to which he has also visited their principal factories.

## REVIEW OF THE CRUDE RUBBER MARKET.

THE feature of the month has been a general change in crude rubber values, the net decline in fine Pará sorts amounting to 7 or 8 cents per pound, with a less marked fall in coarse Pará's and Centrals and Africans.

Since our last published report still lower quotations have been reported, so that the prices given to-day represent an advancing rather than a declining market. It may be pointed out that the fall in prices is not coincident with either largely increased receipts of rubber, or larger supplies in the markets. Indeed, the statistical position would not seem to warrant any particular decline in prices. These facts give color to reports current that present quotations are due to operations in the crude market meant to "bear" prices, which movement has been assisted by the tendency of consumers to refrain as far as possible from buying. What the effect upon prices will be when manufacturers are forced, a little later, to buy heavily, is

an interesting subject for conjecture, especially if the large yield on the Amazon, now confidently predicted in some quarters, should fail of realization. This subject, by the way, is treated fully on another page.

While the month's decline has been considerable, prices are still a trifle above those quoted a year ago, and then the market was considered very high. In introducing the market review published October 1, 1903, THE INDIA RUBBER WORLD said: "At the time of going to press with this issue crude rubber is selling at higher prices than at any time in the past history of the trade, with the single exception of a brief period in 1882 - - - The advance has given rise in some quarters to conjectures that speculative trading is the cause. Such reports are always rife at such a time, but they are not always verified by subsequent developments." We may introduce here a comparative table of prices of a few leading grades during the

same month for three years past, showing a very heavy total advance, and it is not too much to say that such changes, as a result of speculation alone, would have been wholly impossible. The cause has been scarcity of rubber, compared with a steady demand. The comparative figures follow:

## NEW YORK RUBBER PRICES FOR AUGUST (NEW RUBBER).

	1903.	1902.	1901.
Upriver, fine.....	1.18@1.21	95@1.00	70 @.76
Upriver, coarse.....	90@.91	75@.79	56 @.61
Islands, fine.....	1.14@1.16	90@.97	67 @.73
Islands, coarse.....	65@.67	59@.61	45 @.48
Cametá, coarse.....	65@.60	55@.61	46 @.48 1/2

At the large Antwerp sale on September 20 most of the rubber offered found buyers, at prices generally lower than at the preceding sale.

Receipts at Pará, including Caucho, from the beginning of the crop year (July 1) to September 28, amounted to 4005 tons. Receipts for the first three months of preceding crop seasons were as follows:

Tons	1903.	1902.	1901.	1900.
	3430	4490	4330	4520

The United States customs service reports arrivals during the first eight months (January-August) of three years past, with import values, as follows, to which we have added a column showing the average import value per pound:

YEAR.	Pounds.	Value.	Av. Value.
1902.....	33,655,648	\$16,251,770	48.3 cts.
1903.....	38,655,119	23,495,420	60.7 cts.
1904.....	41,629,348	28,855,448	69.3 cts.

Following is a statement of prices of Pará grades, one year ago, one month ago, and on September 30—the current date.

PARA.	Oct. 1, '03.	Sept. 1, '04.	Sept. 30, '04.
Islands, fine, new.....	107@108	116@117	108@109
Islands, fine, old.....	112@113	none here	none here
Upriver, fine, new.....	110@111	120@121	110@112
Upriver, fine, old.....	112@113	122@123	112@114
Islands, coarse, new.....	68@.69	66@.67	60@.62
Islands, coarse, old.....	@	none here	none here
Upriver, coarse, new.....	88@.89	91@.92	86@.87
Upriver, coarse, old.....	@	none here	none here
Caucho (Peruvian) sheet.....	69@.70	68@.69	67@.68
Caucho (Peruvian) ball.....	78@.79	77@.78	76@.77

The market for other sorts in New York, the decline in which has been less marked, is as follows:

AFRICAN.	CENTRALS.	EAST INDIAN.
Sierra Leone, 1st quality 91 @.92	Esmeralda, sausage... 76 @.77	Assam..... 87 @.88
Massai, red..... 91 @.92	Guayaquil, strip..... 62 @.63	Borneo..... @
Benguella..... 70 @.71	Nicaragua, scrap... 74 @.75	
Cameroon ball..... 62 @.63	Panama, slab..... 57 @.58	
Accra flake..... 33 @.34	Mexican, scrap..... 72 @.73	
Lopori ball, prime..... 93 @.94	Mexican, slab..... 57 @.58	
Lopori strip, prime..... 87 @.88	Mangabeira, sheet... 47 @.56	
Ikelemba..... 94 @.95		
Madagascar, pinky..... 78 @.79		

## Late Pará cables quote:

	Per Kilo.		Per Kilo.
Islands, fine.....	6\$600	Upriver, fine.....	7\$200
Islands, coarse.....	3\$200	Upriver, coarse.....	4\$900

Exchange, 12 1/4 d.

## Last Manáos advices:

Upriver, fine.....	7\$250	Upriver, coarse.....	4\$650
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Exchange, 12 3/8 d.

## Bordeaux.

## IMPORTS OF RUBBER—JANUARY TO JUNE.

MONTHS.	1903.	1904.
January.....	kilos 66,864	54,550
February.....	95,007	169,025
March.....	119,582	94,615
April.....	97,641	131,560
May.....	104,098	91,125
June.....	63,473	65,660
Total.....	kilos 546,765	595,935

In regard to the financial situation, Albert B. Beers (broker in India-rubber, No. 68 William street, New York), advises us:

"During the first half of September the money market continued easy, the same as for the three months previous, rubber paper being taken at 4 1/2 @ 5 1/2 per cent. according to grade, but during the latter half of the month the market advanced a little, 5 @ 6 per cent. being the ruling rates."

## Statistics of Para Rubber (Excluding Caucho).

	NEW YORK.					
	Fine and Medium.	Coarse.	Total.	Total 1903.	Total 1902.	Total 1901.
* Stocks, July 30.....	115	9 =	124	224	362	
Arrivals, August.....	542	275 =	817	667	677	
Aggregating.....	657	284 =	941	891	1039	
Deliveries, August.....	572	276 =	848	723	818	
Stocks, August 31....	85	8 =	93	168	221	

	PARÁ.			ENGLAND.		
	1904.	1903.	1902.	1904.	1903.	1902.
Stocks, July 30.....	315	135	40	435	975	1025
Arrivals, August.....	1200	1110	1380	365	475	1200
Aggregating.....	1515	1245	1420	800	1450	2225
Deliveries, August....	1155	1125	1323	600	800	700
Stocks, Aug. 31 ..	360	120	97	200	650	1525

	1904.	1903.	1902.
World's visible supply, August 31.....	1152	1737	2746
Para receipts, July 1 to August 31.....	2210	2160	2367
Para receipts of Caucho, same dates.....	280	300	323
Afloat from Pará to United States, August 31	86	364	418
Afloat from Pará to Europe, August 31.....	413	435	468

[\* Corrected figures.]

## Liverpool.

WILLIAM WRIGHT & CO., report (September 1):

*Fine Pará.*—The scarcity of stocks and the small receipts during the early part of the month in Pará caused prices to still further advance. The record price of 5s. 2 1/2 d. was paid for Upriver, and 5s. 1d. for Islands fine. At the close there are welcome signs of a break, closing with sellers on spot of Upriver 5s., and Islands 4s. 11d. There has been a fair spot demand, but mostly owing to American orders and covering. Forward business has been fairly active, the distant position being sold at considerable discount—August-September 4s. 11d. @ 5s. 3 1/4 d.; September-October 4s. 10d. @ 4s. 10 1/4 d.; October-November 4s. 10d. @ 4s. 9 1/2 d.; November-December 4s. 9d. @ 4s. 7 1/4 d.

## Ceylon Rubber.

EXPORTS of cultivated rubber, mostly Pará variety, from Ceylon, from January 1 to August 22, 1904:

To Great Britain.....	pounds 37,633
" Germany.....	3,612
" Australia.....	332
" Belgium.....	111
" United States.....	63
" Holland.....	15

Total, eight months.....	41,766
Total, same months of 1903.....	26,463

## Rubber Scrap Prices.

NEW YORK quotations—prices paid by consumers for car-load lots, in cents per pound—show a slight advance since the first of September, on old rubber boots and shoes:

Old Rubber Boots and Shoes—Domestic.....	5 1/2 @ 5 1/2
Do — Foreign.....	4 1/2 @ 4 1/2
Pneumatic Bicycle Tires.....	3 1/2 @ 4
Solid Rubber Wagon and Carriage Tires.....	6
White Trimmed Rubber.....	5 1/2 @ 5 1/2
Heavy Black Rubber.....	4
Air Brake Hose.....	2 1/4 @ 2 3/8
Fire and Large Hose.....	1 1/2 @ 1 1/2
Garden Hose.....	1 3/8 @ 1 1/2
Matting.....	1 1/4 @ 1 1/4



## London.

EDWARD TILL &amp; Co. [September 1] report stocks:

	1904.	1903.	1902.
LONDON { Para sorts..... tons —			
{ Borneo..... 60	28	128	
{ Assam and Rangoon..... 10	8	11	
{ Other sorts..... 378	202	396	
Total..... 448	238	535	
LIVERPOOL { Para..... 199	650	1532	
{ Caucho..... 229	222	203	
{ Other sorts..... 632	254	461	
Total, United Kingdom..... 1508	1364	2731	
Total, August 1..... 1764	1781	3053	
Total, July 1..... 1920	2285	3595	
Total, June 1..... 1667	2248	3687	
Total, May 1..... 1644	2530	3788	
Total, April 1..... 1367	2525	3326	

## PRICES PAID DURING AUGUST.

	1904.	1903.	1902.
Pará fine, hard.. . . . 5/ @ 5/ 2 3/4 4/ 1 @ 4/ 3 3/ 0 1/4 @ 3/ 3			
Do soft.. . . . 4/ 10 1/2 @ 5/ 1 1/2 3/ 11 @ 4/ 2 1/2 2/ 10 1/4 @ 3/ 1 1/2			
Negroheads, scrappy .3/ 10 @ 3/ 11 3/ 2 @ 3/ 3 3/4 2/ 3 1/2 @ 2/ 6			
Do Cameté. 2/ 8 3/4 @ 2/ 10 1/2 2/ 6 1/4 @ 2/ 6 1/4 1/ 11 1/2 @ 2/ 0 1/4			
Bolivian..... 5/ @ 5/ 2 1/2 4/ 2 1/2 @ 4/ 3 1/2 3/ 0 1/4 @ 3/ 5			
Caucho ball..... 3/ 5 @ 3/ 6 3/ 0 3/4 @ 3/ 3 2/ 4 @ 2/ 5 1/4			
Do slab..... 2/ 10 1/2 @ 2/ 11 2/ 7 @ 2/ 7 1/2 1/ 11 1/2 @ 2/ 1			

SEPTEMBER 16.—The market for Pará sorts for a week past has been weak and declining, with a firmer tendency at the close. Business has been on a small scale, including fine hard Pará, Spot and September delivery, at 4s. 9d. @ 4s. 10d. and buyers; October 4s. 7d. @ 4s. 9 3/4d.; November 4s. 6 1/2d. @ 4s. 8d.; December 4s. 5 1/2d.

Medium kinds in auction to-day were in moderate request and a small part sold at easier prices. Colombian: Good, clean, brown scrap 3s. 5d.; weak, softish white scrap 2s. 7d. Central American: Fair brown scrap and roll 3s. 2 3/4d. @ 3s. 3 1/4d. Madagascar: Fair to good pinky 3s. 3 1/4d. @ 3s. 4 1/4d.; soft, gummy ball 1s. 9d. Assam: Fair red No. 1 sold at 3s. 6 1/4d.; mixed heated and dirty 1s. 10 1/4d.

Ceylon and Straits: Twenty-nine packages offered and 20 sold. Fine, thin, Ceylon biscuits at 5s. 2d. @ 5s. 3 1/4d.; ditto, darker, 5s. 1d.; scrap 4s. 3d. @ 4s. 3 1/2d. Straits, fine, dark, thin biscuit, rather moldy, 5s. 2d.; good scrap at 4s. 3 1/4d.

## Guatemala.

EXPORTS of rubber during 1903, according to a Belgian official source, were:

To United States.....	kilos 153,100
" Great Britain.....	23,400
" Germany.....	210,600
" France.....	44,100
" Belgium.....	11,100

Total, 1903..... kilos 442,300

Total, 1902..... 254,100

## Rubber Receipts at Manaos.

DURING August and two months of the crop season for three years [courtesy of Messrs. Witt & Co.]:

FROM -	1904.	1903.	1902.	1904.	1903.	1902.
Rio Purús—Acre..... tons	361	294	324	506	457	497
Rio Madeira.....	330	240	283	479	492	546
Rio Juruá.....	—	—	1	25	2	4
Rio Javary—Iquitos.....	188	100	86	213	114	100
Rio Solimões.....	6	15	42	10	25	40
Rio Negro.....	—	3	4	—	15	21
Total.....	885	652	740	1233	1105	1217
Caucho.....	79	47	51	178	208	216
Total.....	964	699	791	1411	1313	1433

## Para.

KANTHACK &amp; Co. report [September 1]:

With an active demand prices had continued to improve, but they had seemingly been pushed up too rapidly and buyers became more reserved,

modifying their prices. During the last few days the news of a considerable drop at the consuming markets caused a rapid decline here of about 2 1/2 pence from the highest point. Receipts have remained normal, perhaps to the disappointment of those who expected an early increase, from the large influx of laborers coming from the southern famine stricken states. New hands, however, are of little value, until they have thoroughly mastered the work and become used to forest life.

## Antwerp.

TO THE EDITOR OF THE INDIA RUBBER WORLD: On September 2 a small sale by inscription took place, but out of 16 tons offered only 5 tons found buyers, at prices as follows:

	Estimation.	Sold at.
Congo Alima.....	francs 11.00	10.90
Congo Lobay.....	10.50	10 57 1/2
Congo Ibenga.....	9 50	9 50

Besides this unimportant sale no transactions worth mentioning have taken place, pending the large sale scheduled for September 20, in which 515 tons, mostly Congo sorts will be exposed.

C. SCHMID &amp; CO., SUCCESEURS.

Antwerp, September 16, 1904.

## ANTWERP RUBBER STATISTICS FOR AUGUST.

DETAILS.	1904.	1903.	1902.	1901.	1900.
Stocks, July 30. kilos	872,746	377,527	689,772	1,040,441	1,133,702
Arrivals in August.	244,704	347,062	321,192	286,816	498,188
Congo sorts .....	221,665	221,177	294,073	267,939	385,738
Other sorts .....	23,039	24,926	27,119	18,877	112,450
Aggregating.....	1,117,450	724,589	1,010,964	1,327,257	1,631,890
Sales in August.....	514,055	404,603	254,563	642,902	575,766
Stocks, August 31.	602,495	319,986	756,401	684,355	1,056,124
Arrivals since Jan. 1	3,709,621	3,326,394	3,558,836	3,838,870	4,167,418
Congo sorts .....	3,069,256	2,811,127	3,295,549	3,511,496	3,506,913
Other sorts .....	640,365	355,066	263,287	327,374	660,505
Sales since Jan. 1...	3,718,026	3,664,513	3,217,144	3,708,464	3,403,285

## RUBBER ARRIVALS AT ANTWERP.

SEPT. 6.—By the *Philippeville*, from the Congo:

Bunge & Co..... (Société Générale Africaine) kilos	164,000
Do .....	(Société Isangi) 17,000
Do .....	(Chemins de fer des Grand Lacs) 20,000
Do .....	(Société Anversoise) 50,000
Comptoir Commercial Congolais.....	17,000
M. S. Cols.....	
(Cie. Bruxelloise pour le commerce du Haut Congo)	2,000
M. S. Cols..... (Alima)	1,000
Société Coloniale Anversoise..... (Cie. du Kasai)	53,000
Do .....	(Sud Kamerun) 4,000
Do .....	(Cie. de Lomami) 12,000
Do .....	(Belge du Haut Congo) 2,000
Société Générale de Commerce..... (Alimaïenne)	4,000
Charles Dethier..... (La M'Poko)	25,000
Do .....	(La Haut Sangha) 1,000
Comptoir des Produits Coloniaux..... (Ekela Sangha)	10,000
Do .....	(Cie. de la N'Goko) 3,000
Do .....	
..... (Cie. Générale d'Extraction)	2,000 387,000

## The Gutta-Percha Market.

THE *Gummi-Zeitung* (Dresden) of September 9 reports: A foreign subscriber, who is intimately acquainted with the existing conditions, writes: "The condition of the Gutta-percha market is such as has not been experienced in a long time. The abnormally high prices of Gutta-percha for the past years have been followed by a depression which was not thought possible by even the worst pessimists. A direct result of these low prices is the materially increased export of Borneo rubber, the Gutta-percha gatherers not being able to balance their accounts. The generally poor condition of the produce market compels the natives to gather, naturally, only the best paying forest products, in which Gutta-percha cannot be included, the exploitation of this stuff being extremely difficult and depend-

ing on certain conditions, so that the natives prefer the gathering of any other product. The receipts are very small, as well as the stocks on hand, leaving but little choice to buyers. For the near future no animation in the Gutta-percha market can be looked for, there being no extensive cable projects, at present on hand, according to reports from Europe."

## IMPORTS FROM PARA AT NEW YORK.

[The Figures Indicate Weights in Pounds.]

September 3.—By the steamer *Bernard*, from Manáos and Pará:

IMPORTERS.	Fine.	Medium.	Coarse.	Cauchó.	Total.
New York Commercial Co.	43,300	1,500	56,700	.....	101,500
Poel & Arnold.....	6,000	700	28,500	1,400	36,600
A. T. Morse & Co.....	1,700	200	32,000	.....	33,900
Lionel Hageners & Co..	10,000	.....	2,000	.....	12,000
Total.....	61,000	2,400	119,200	1,400	184,000

September 15.—By the steamer *Cearense*, from Manáos and Pará:

New York Commercial Co.	185,100	31,300	44,100	.....	260,500
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A. T. Morse & Co.....	47,300	5,500	59,200	.....	112,000
Poel & Arnold.....	36,600	6,400	50,800	700	94,500
General Rubber Co.....	.....	.....	21,400	.....	21,400
Hagemeyer & Brunn.....	7,000	.....	3,500	.....	10,500
Lionel Hageners & Co..	7,700	.....	2,200	.....	9,900
Edmund Reeks & Co....	3,500	.....	3,500	.....	7,000
Total.....	287,200	43,200	184,700	700	515,800

September 24.—By the steamer *Hubert*, from Manáos and Pará:

A. T. Morse & Co.....	112,800	16,800	109,900	300	234,800
New York Commercial Co.	59,900	20,000	84,700	1,800	166,400
Poel & Arnold.....	78,800	16,800	37,400	7,500	140,500
General Rubber Co.....	49,000	11,300	9,700	.....	70,000
Robinson & Tallman....	21,500	4,700	2,900	.....	29,100
Lionel Hageners & Co..	16,000	4,700	3,600	.....	24,300
Hagemeyer & Brunn.....	13,300	2,400	3,700	.....	19,400
G. Amsinck & Co.....	7,900	.....	3,500	.....	11,400
Total.....	359,200	76,700	255,400	9,600	700,900

[NOTE.—The steamer *Dunstan*, from Pará, is due at New York on October 4, with 310 tons Rubber.]

## PARA RUBBER VIA EUROPE.

FOUNDS.	
Aug. 29.—By the <i>Umbria</i> =Liverpool:	
New York Commercial Co. (Fine).....	39,000
A. T. Morse & Co. (Coarse).....	4,500 43,500
Aug. 29.—By the <i>Kroonland</i> =Antwerp:	
New York Commercial Co. (Fine).....	45,000
Sept. 1.—By the <i>Baltic</i> =Liverpool:	
A. T. Morse & Co. (Fine).....	11,500
Sept. 3.—By the <i>Campania</i> =Liverpool:	
George A. Alden & Co. (Fine).....	28,000
Sept. 6.—By the <i>Zeeland</i> =Antwerp:	
New York Commercial Co. (Fine).....	23,000
Sept. 12.—By the <i>Etruria</i> =Liverpool:	
New York Commercial Co. (Fine).....	22,500
A. T. Morse & Co. (Coarse).....	1,500
Wallace L. Gough (Coarse).....	3,500 27,500
Sept. 21.—By the <i>Vaderland</i> =Antwerp:	
Poel & Arnold (Fine).....	21,500
Poel & Arnold (Coarse).....	3,000 25,500

## OTHER ARRIVALS IN NEW YORK

## CENTRALS.

FOUNDS.	
Aug. 26.—By the <i>El Dba</i> =New Orleans:	
A. T. Morse & Co.....	7,000
A. N. Rotholz.....	2,000
Manhattan Rubber Mfg. Co.....	2,300 11,300
Aug. 29.—By the <i>Vigilante</i> =Mexico:	
E. Steiger & Co.....	2,500
H. Marquardt & Co.....	2,500
Harburger & Stack.....	2,000
American Trading Co.....	2,500
Samuels & Cummings.....	300 9,800
Aug. 31.—By the <i>Seguranca</i> =Colon:	
Hirzel, Feltman & Co.....	16,500
G. Amsinck & Co.....	11,400
J. A. Medina & Co.....	7,400
Harburger & Stack.....	3,600
Isaac Brandon & Bros.....	1,600
Meyer Hecht.....	1,100
Eggers & Heinlein.....	1,000
W. Louza & Co.....	500 43,100
Sept. 2.—By the <i>Tintoretto</i> =Bahia:	
J. H. Rossbach & Bros.....	17,000
Hirsch & Kaiser.....	16,000 33,000
Sept. 2.—By the <i>El Cid</i> =New Orleans:	
Manhattan Rubber Mfg. Co.....	9,000
A. T. Morse & Co.....	1,000 10,000
Sept. 6.—By the <i>Sibiria</i> =Carthage, etc.:	
Banco de Exportasas.....	2,200
Najeeb, Mullak Co.....	2,000
Isaac Kuble & Co.....	2,000
Louis Wolff.....	1,000
Mecke & Co.....	500
Isaac Brandon & Bros.....	700 8,400
Sept. 7.—By the <i>Alliance</i> =Colon:	
Hirzel, Feltman & Co.....	16,200
Harburger & Stack.....	1,900
American Trading Co.....	1,600
Meyer Hecht.....	1,600
A. Rosenthal & Sons.....	1,500
Mecke & Co.....	700
Eggers & Heinlein.....	700

## CENTRALS—Continued.

G. Amsinck & Co.....	700
Smithers, Nordenholt & Co.....	600
Jiminez & Escobar.....	400
J. A. Medina & Co.....	400 26,300
Sept. 10.—By the <i>Monterey</i> =Mexico:	
Harburger & Stack.....	2,000
E. N. Tibbals & Co.....	200
Graham, Hinkley & Co.....	200
American Trading Co.....	300
H. W. Peabody & Co.....	500 3,200
Sept. 12.—By the <i>Germanic</i> =Liverpool:	
J. H. Rossbach & Bros.....	25,000
Sept. 12.—By the <i>Cedric</i> =Liverpool:	
J. H. Rossbach & Bros.....	25,000
Lawrence Johnson & Co.....	5,000 30,000
Sept. 12.—By the <i>Proteus</i> =New Orleans:	
A. T. Morse & Co.....	2,500
G. Amsinck & Co.....	500 3,000
Sept. 13.—By the <i>Cemic</i> =Liverpool:	
J. H. Rossbach & Bros.....	22,000
Lawrence Johnson & Co.....	7,000 29,000
Sept. 14.—By the <i>Financ</i> =Colon:	
Hirzel, Feltman & Co.....	19,700
Geo. A. Alden & Co.....	6,800
A. Santos & Co.....	6,100
G. Amsinck & Co.....	5,500
Lawrence Johnson & Co.....	2,100
Harburger & Stack.....	2,200
Isaac Brandon & Bros.....	1,000
J. A. Medina & Co.....	1,400
A. M. Capen Sons.....	900
Dumarest Bros & Co.....	900
Smithers, Nordenholt & Co.....	600
E. B. Strout.....	500
Meyer & Hecht.....	500
Lanman & Kemp.....	400
Neuss Hessein & Co.....	300
Silva, Bussenius & Co.....	400
Kunhardt & Co.....	200 49,300
Sept. 14.—By the <i>Cameous</i> =Bahia:	
J. H. Rossbach & Bros.....	31,500
Sept. 16.—By the <i>El Norte</i> =New Orleans:	
G. Amsinck & Co.....	3,000
A. T. Morse & Co.....	2,500
Manhattan Rubber Mfg. Co.....	1,000 6,500
Sept. 15.—By the <i>Aurania</i> =Liverpool:	
Geo. A. Alden & Co.....	3,500
Sept. 17.—By the <i>Esperanza</i> =Mexico:	
H. Marquardt & Co.....	2,000
E. Steiger & Co.....	1,000
Harburger & Stack.....	700
L. N. Chemedli & Co.....	500
Graham, Hinkley & Co.....	500 4,700
Sept. 20.—By the <i>Advance</i> =Colon:	
Lawrence Johnson & Co.....	11,200
Hirzel, Feltman & Co.....	8,200
E. B. Strout.....	3,000
Isaac Brandon & Bros.....	1,400
A. Rosenthal & Sons.....	1,100
Cadenas & Coe.....	1,000
Suzarte & Whitney.....	300
H. Marquardt & Co.....	100 26,300
Sept. 20.—By the <i>Sarnia</i> =Carthage:	
Najeeb, Mullak Co.....	3,000
Isaac Brandon & Bros.....	2,100
D. A. De Lima & Co.....	1,500

## CENTRALS—Continued.

Lawrence Johnson & Co.....	1,000
Graham, Hinkley & Co.....	1,000
G. Amsinck & Co.....	800
Isaac Kuble & Co.....	500
Kunhardt & Co.....	500
C. Wessels & Co.....	400 10,800
Sept. 21.—By the <i>Tennyson</i> =Pernambuco:	
A. D. Hiltch & Co.....	7,000
Lawrence Johnson & Co.....	2,000 9,000
AFRICANS.	
Aug. 25.—By the <i>Teutonic</i> =Liverpool:	
Poel & Arnold.....	44,000
Earle Brothers.....	2,000 46,000
Aug. 25.—By the <i>Graf Waldersee</i> =Hamburg:	
A. T. Morse & Co.....	27,000
George A. Alden & Co.....	11,000
Poel & Arnold.....	4,000 42,000
Aug. 29.—By the <i>Umbria</i> =Liverpool:	
A. T. Morse & Co.....	20,000
Aug. 29.—By the <i>Celtic</i> =Liverpool:	
Poel & Arnold.....	34,000
Henry A. Gould Co.....	4,000 38,000
Aug. 29.—By the <i>Kroonland</i> =Antwerp:	
Poel & Arnold.....	125,000
A. T. Morse & Co.....	90,000
Robinson & Tallman.....	18,000
Joseph Cantor.....	15,000
Winter & Smillie.....	15,000 263,000
Aug. 29.—By the <i>Rotterdam</i> =Rotterdam:	
Poel & Arnold.....	11,000
Sept. 3.—By the <i>Campania</i> =Liverpool:	
George A. Alden & Co.....	22,500
A. T. Morse.....	11,500
Poel & Arnold.....	5,000
Rubber Trading Co.....	3,000 42,000
Sept. 6.—By the <i>Zeeland</i> =Antwerp:	
George A. Alden & Co.....	138,000
Sept. 6.—By the <i>Victorian</i> =Liverpool:	
George A. Alden & Co.....	89,000
Sept. 7.—By the <i>Pennsylvania</i> =Hamburg:	
Poel & Arnold.....	27,000
George A. Alden & Co.....	8,500
Rubber Trading Co.....	6,000 41,500
Sept. 8.—By the <i>Maestic</i> =Liverpool:	
General Rubber Co.....	23,000
Poel & Arnold.....	11,500
A. T. Morse & Co.....	2,000 36,500
Sept. 12.—By the <i>Etruria</i> =Liverpool:	
George A. Alden & Co.....	23,000
Henry A. Gould Co.....	3,000
Poel & Arnold.....	2,000 28,000
Sept. 13.—By the <i>Finland</i> =Antwerp:	
Winter & Smillie.....	6,500
Sept. 19.—By the <i>Arabic</i> =Liverpool:	
Poel & Arnold.....	22,500
Wallace L. Gough.....	1,000
Henry A. Gould Co.....	5,000
A. T. Morse & Co.....	3,000 31,500
Sept. 22.—By the <i>Peninsular</i> =Lisbon:	
General Rubber Co.....	56,000



## Exports:

India rubber.....	38,250	\$41,306
Reclaimed rubber.....	142,949	19,433
Rubber Scrap Imported.....	623,523	\$20,957

		POUNDS.
AUG. 2.—By the <i>Michigan</i> =Liverpool:		
Poel & Arnold—African .....		1,868
AUG. 3.—By the <i>Famion</i> =Tampico:		
George A. Alden & Co.—Central....		218
AUG. 8.—By the <i>Rep. ble</i> =Liverpool:		
Poel & Arnold—African.....		31,641
AUG. 15.—By the <i>Oakmore</i> =Antwerp:		
George A. Alden & Co.—African....		2,348
AUG. 15.—By the <i>Anglian</i> =London:		
Poel & Arnold—Gutta-percha.....		8,852
AUG. 15.—By the <i>Sachem</i> =Liverpool:		
Poel & Arnold—African.....		24,746
AUG. 17.—By the <i>Anglian</i> =London:		
George A. Alden & Co.—East Indian.		762
AUG. 18.—By the <i>Boh. mien</i> =Liverpool:		
George A. Alden & Co.—Fine Para. ....	11 2 0	
George A. Alden & Co.—African....	4,060	15,286
AUG. 22.—By the <i>Pontos</i> =Hamburg:		
Poel & Arnold—African.....		3,496
AUG. 29.—By the <i>Sagamore</i> =Liverpool:		
Poel & Arnold—African.....		2,206
AUG. 30.—By the <i>Cambrian</i> =London:		
George A. Alden & Co.—East Indian.		672
AUG. 31.—By the <i>Assyria</i> =Hamburg:		
George A. Alden & Co.—East Indian.	13,184	
George A. Alden & Co.—African....	3,000	16,184
Total.....		108,282

[Value, \$694,268.]

PORT OF NEW YORK—AUGUST.		
<i>Imports :</i>	POUNDS.	VALUE.
India-rubber.....	3,793,199	\$2,762,936
Gutta-percha.....	31,153	17,282
Gutta-jelutong (Pontianak) ..	1,492,144	49,071
<b>Total.....</b>	<b>5,316,496</b>	<b>\$2,829,289</b>

UNITED STATES.				GREAT BRITAIN.			
MONTHS.	IMPORTS.	EXPORTS.	NET IMPORTS.	MONTHS.	IMPORTS.	EXPORTS.	NET IMPORTS.
July, 1904.....	3,197,909	218,738	2,979,171	July, 1904.....	4,082,176	1,904,224	2,177,952
January-June.....	34,491,123	1,760,986	32,730,137	January-June...	30,909,872	17,549,002	13,360,810
Seven months, 1904.....	37,689,032	1,979,724	35,709,308	Seven months, 1904.....	34,992,048	19,453,286	15,538,762
Seven months, 1903.....	35,539,720	1,751,513	33,788,207	Seven months, 1903.....	32,200,112	23,013,872	9,186,240
Seven months, 1902.....	30,308,134	2,102,630	28,205,504	Seven months, 1902.....	29,076,006	17,790,528	11,285,568
GERMANY.				ITALY.			
MONTHS.	IMPORTS.	EXPORTS.	NET IMPORTS.	MONTHS.	IMPORTS.	EXPORTS.	NET IMPORTS.
July, 1904.....	2,526,920	615,120	1,911,800	July, 1904.....	59,400	21,340	38,060
January-June.....	18,294,700	5,233,580	13,061,180	January-June.....	841,720	52,140	789,580
Seven months, 1904.....	20,821,680	5,848,700	14,972,980	Seven months, 1904.....	901,120	73,480	827,640
Seven months, 1903.....	21,163,560	7,211,160	13,952,400	Seven months, 1903.....	1,021,240	100,760	920,480
Seven months, 1902.....	19,546,780	7,553,180	11,993,600	Seven months, 1902.....	870,760	80,960	789,800
FRANCE.*				AUSTRIA-HUNGARY.			
MONTHS.	IMPORTS.	EXPORTS.	NET IMPORTS.	MONTHS.	IMPORTS.	EXPORTS.	NET IMPORTS.
July, 1904.....				July, 1904.....	215,820	4,400	211,420
January-June.....				January-June.....	1,541,320	10,340	1,530,980
Seven months, 1904.....	12,802,680	7,388,260	5,414,420	Seven months, 1904.....	1,757,140	14,740	1,742,400
Seven months, 1903.....	9,051,840	5,303,020	3,748,820	Seven months, 1903.....	1,723,480	16,720	1,706,760
Seven months, 1902.....	10,013,520	4,017,600	5,995,920	Seven months, 1902.....	1,600,280	10,780	1,589,500
BELGIUM.†				NOTE.—German statistics include Gutta-percha, Balata, old rubber, and substitutes. French, Austrian, and Italian figures include Gutta-percha. The exports from the United States embrace the supplies for Canadian consumption.			
MONTHS.	IMPORTS.	EXPORTS.	NET IMPORTS.				
April, 1904.....	921,558	1,134,514	212,961				
January-March.....	5,109,984	4,014,579	1,095,405				
Four months, 1904.....	6,031,542	5,154,098	877,444				
Four months, 1903.....	5,370,251	3,408,302	1,961,949				
Four months, 1902.....	5,285,907	3,196,080	2,089,827				

\*General Commerce
†Special Commerce
‡Net Exports

NOTE.—German statistics include Gutta-percha, Balata, old rubber, and substitutes. French, Austrian, and Italian figures include Gutta-percha. The exports from the United States embrace the supplies for Canadian consumption.

\* General Commerce

† Special Commerce

Net Exports

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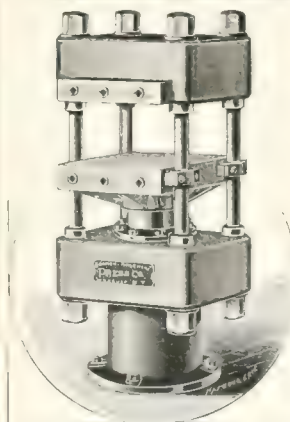
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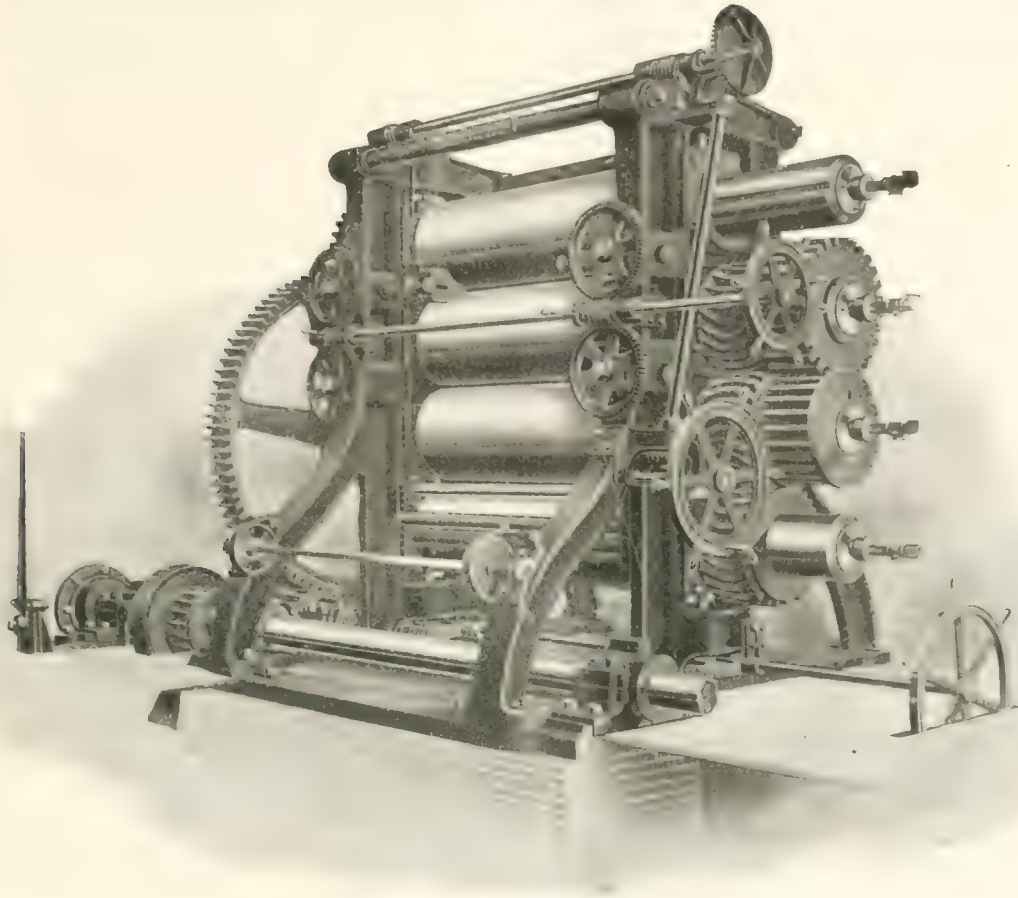
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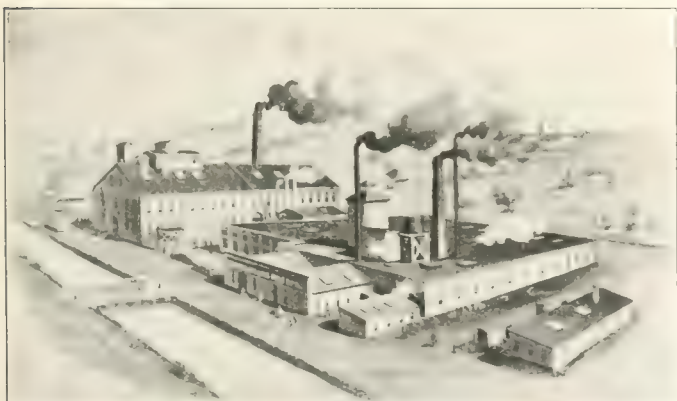
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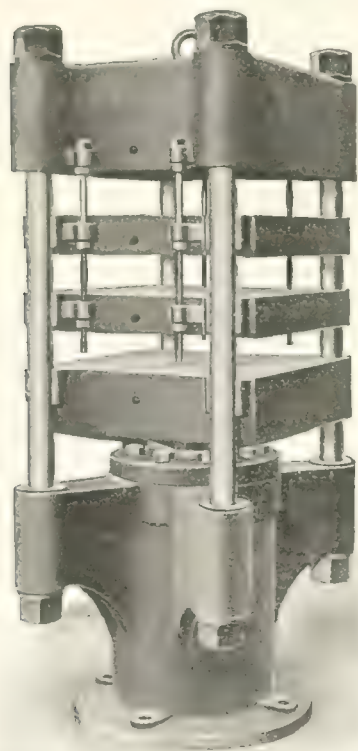
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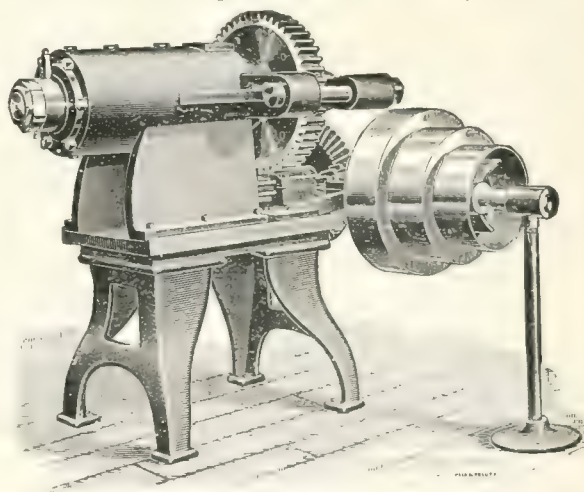
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[FROM "LA J USTA PLANTER," CHICAGO.]

THIS issue of the *Planter* contains a number of articles taken from THE INDIA RUBBER WORLD, now in its fifteenth year, and recognized by every one interested in rubber in any way, as the leading publication in this trade. The information given to its readers can be absolutely relied upon. Its Editor has a skilled and practical knowledge of the manufacturing side of the business, and in recent years has, at his own expense, covered a large portion of the world, so that he might be able to give his readers facts in regard to the production of the raw material on cultivated estates. We have no interest in THE INDIA RUBBER WORLD, except as the best informed and most authoritative journal of that trade published in this country, but it would be well worth the while of our investors to become its regular readers.

## Small Advertisement Department.

### SITUATIONS WANTED.

**FOREMAN.**—Position wanted as Foreman in Calender and Mill Room in Mechanical Rubber factory, capable of handling help to good advantage; have had over 20 years' experience at same; qualified to take charge or start a small factory; can furnish best of references. Address C. H. A., care of THE INDIA RUBBER WORLD. [637]

**FOREMAN.**—Position wanted as Foreman of Mill Room in factory; best of references. Address C. H. F., care of THE INDIA RUBBER WORLD. [638]

**FOREMAN.**—Position wanted as Foreman of Calender or Mill Room, preferably in a Shoe factory, by a capable man of over 20 years' experience; can run the stock, compound, and vulcanize same. Address S. L. I., care of THE INDIA RUBBER WORLD. [640]

**MANAGER.**—Position desired in connection with the management of Mechanical Rubber Goods Factory. Capable of organizing and handling workmen to best advantage; practical knowledge of all gums and compounding ingredients; able to originate correct stocks for the different requirements, the up to date Machinery required for Mechanicals, solid and cushion carriage and pneumatic Bicycle and Motor Car Tires. Address M. R. G. F., care of THE INDIA RUBBER WORLD. [634]

**SALES MANAGER** thoroughly competent to handle business of any magnitude, is open for engagement. Five years' experience as Sales Manager of a rubber company doing a business of \$1,500,000; valuable European experience during past five years; thorough business system; best references. Address SALES MANAGER, care of THE INDIA RUBBER WORLD. [639]

### SITUATIONS OPEN.

#### A GOOD POSITION IN EUROPE.

**OPEN** for technical expert in manufacture of hard and soft rubber goods, as superintendent of works. Replies stating experience, present work and salary, etc., to EUROPE, care of THE INDIA RUBBER WORLD. [644]

**FOREMEN** and experienced Rubber Workers for all departments wanted in an up-to-date modern factory, equipped to make all kinds of Mechanical Rubber Goods. Beautifully located near Philadelphia. Applications must state qualifications and experience. Address X. Y. Z., care of THE INDIA RUBBER WORLD. [599]

### FOR SALE.

**Everything in Second Hand Rubber Machinery. We Do Not Handle Scrap Iron.**  
W. C. COLEMAN CO., Setauket, New York.

### FOR SALE.

**ALL KINDS RUBBER WASTE.**—We sell at low price, pure unvulcanized Rubber Scrap from Cement Waste. Write for free sample. Best cash prices paid for rubber scrap and waste. Old Wringer Rolls bought and sold a specialty. UNITED STATES WASTE RUBBER CO., No. 487 N. Warren avenue, Brockton, Mass.

### WANTED.

**WANTED** to rent with privilege of purchase, a small detached Rubber factory, within 100 miles of New York city; must be well equipped with Mill, Vulcanizer, Steam Drying Tables, ample Power, heated throughout. A factory preferred with the condition in the lease of privilege of purchase within one year. Address No. 67, care of THE INDIA RUBBER WORLD. [642]

### WANTED.

**SALESMEN** to organize every state. Only men who are successful and who appreciate and know how to take advantage of an exceptional opportunity need apply.  
A. S. GRIFFIN, Canton, Ohio. [643]

### WANTED.

**SUPERINTENDENT** with years of experience in the manufacture of Mechanical Rubber Goods, Pneumatic and Solid Tires, Sundries, Toys, Seamless Goods, etc. is open for position. Expert on up-to-date Machinery, Constructions, Compounding, and General Equipment. Address PRACTICAL EXPERT, care of THE INDIA RUBBER WORLD. [645]

### Chinese Coolies for Rubber Plantations.

**WE** can furnish by January 1, 1905, strong, healthy and carefully selected Coolies, imported direct from China with permission of the Imperial Government, for service on Rubber Plantations. No interruption of work through fiestas. Planters interested can obtain full information by addressing EASTMAN G. CURREY, General Manager, The Eastern Transportation Company, Nashville, Tenn.

### INSULATION FORMULAS WANTED.

**Rubber Insulating nonvulcanizing compounds, cost of product must be low; superior quality not necessary.** Address FORMULA, care of THE INDIA RUBBER WORLD. [641]

### FOR SALE LARGE FACTORY IN NEW JERSEY

Only an hour from New York. Property of over five acres of ground, with direct rail connection with Pennsylvania system. New three-story brick building, 60,000 sq. ft. with 1. corner giving 57,000 square feet floor space; two horse power motor and engine, elevator; building equipped with fire pump, water tower, tanks and sprinkler system, plenty of cheap labor. Property can be bought at half value to someone interested, and on easy terms.

Also Factories in and near New York and in Eastern States for sale or lease.  
**NICHOLSON & CO., FACTORY BROKERS, SOLE AGENTS.**  
150 BROADWAY, NEW YORK.

### Rubber Mill Machinery For Sale.

**MOST** of the machinery that I have on hand is from the different factories which I have dismantled, such as the George Watkinson & Co. Philadelphia; International Rubber Co., Jersey City; the old Boston Rubber Co.'s plant, Chelsea, Mass.; International A. & V. Tire Co.'s plant, Newton Upper Falls; also part of the machinery at Milltown, N. J., and of the Reclaiming plant, Malden, Mass., and the New Brunswick Rubber Co., which I bought from the India Rubber Co., at the plant in New Brunswick, N. J.

The Watkinson machinery cannot be sold for use in manufacturing rubber shoes; all the other machinery here mentioned is offered without any such restrictions.

All this stock includes large Engines, Boilers, Pumps, Hydraulic Pumps, Accumulators and weights, Presses of all sizes, Hydraulic Presses, Mills, Grinders, Crackers, Washers, Calenders, Devulcanizers, Shafting, Piping, Tire Molds, long solid vehicle tire molds (all sizes of cavities); also pneumatic Molds and steam molds.

In fact I have all kinds of rubber machinery that was used in some of the largest factories in the country. All of the machinery mentioned is in the best possible condition and almost as good as new. It was taken from factories that went out of business and was not removed because it was thought to be worn out.

I bought this machinery practically at scrap iron prices, and will sell it at a little above scrap iron prices. This machinery lies in my storehouse and yard in Trenton. Favor me with a call.

PHILIP MCGRORY, Trenton, New Jersey.

**HERBERT S. KIMBALL,**  
**MILL ARCHITECT and ENGINEER,**  
RUBBER FACTORY ENGINEERING.  
101 TREMONT STREET, BOSTON, MASS.

### Perused with Great Interest.

TO THE EDITOR OF THE INDIA RUBBER WORLD: - - I take this opportunity of expressing our high opinion of your Journal, which we peruse with great interest on its arrival here monthly. Yours faithfully,

R. B. BLACK.

[Managing Director, The Rubber Co. of Scotland, Limited.]  
Forthvale Works, Stirling, August 17, 1904.

### Good Business for August.

THE Publishers feel no little pleasure in mentioning that the number of unsolicited new subscription orders for THE INDIA RUBBER WORLD during August exceeded the number recorded in any previous month, although this is one of the proverbially "dull" months of the year. This would indicate that the dullness has not extended to the rubber industry.

### "Crude Rubber and Compounding Ingredients."

THE manager of an important rubber factory says: "I use this book almost every day in my factory, and frequently many times a day. It is the best book, in a practical sense, that the rubber trade possesses."



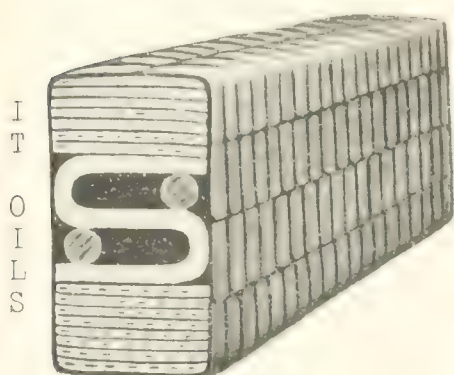
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N. B. O. is worthy your confidence

GUM CORE PACKING  
Made with round or oval core4 Grades: PERFECTION RECORD  
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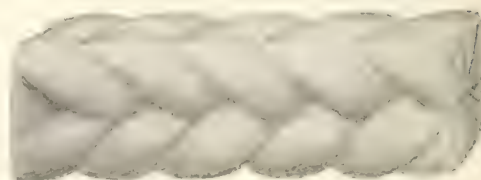
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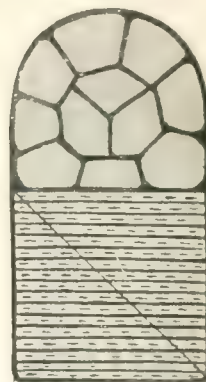
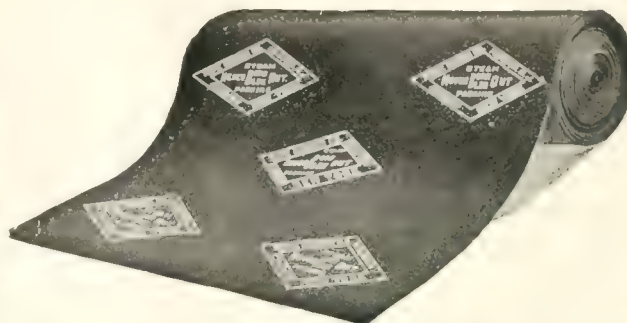
Best Packing  
made by anyone anywhere

FLAX PACKING



4 Grades: ROYAL INDEPENDENCE IT'S GOOD CHALLENGE

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TN. B. O. SHEET PACKING  
Will not harden under any degree of heat

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HOME RUBBER CO., TRENTON, N. J.

80 &amp; 82 Reade St., NEW YORK CITY

83 Lake St., CHICAGO

Made for high pressure  
Made for low pressure

# MAKE \$1500 A YEAR WITHOUT SPECULATING



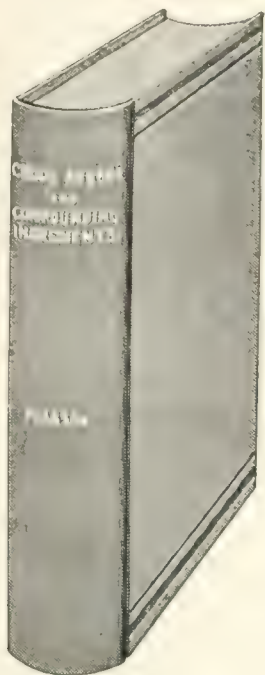
FIVE ACRES of the Ystilja rubber plantation will produce a net income of \$1500.00 or more per year. Shares can be purchased for cash in advance, or on small monthly payments. The dividends earned while paying for your shares will almost equal their cost, and liberal provisions are made for those who cannot keep up the small monthly payments. Rubber trees grow very rapidly and profits from them quickly accumulate into fortunes. Write for our latest book about the plantation, reports of inspectors, etc., full data regarding the growing of rubber, and the cost and profit of shares.

## CONSERVATIVE RUBBER PRODUCTION CO.

920 PARROTT BLDG.

SAN FRANCISCO, - - CAL.

Mention The India Rubber World when you write.



PRICE \$10.  
PREPAID.

Letter from the Chemist  
of a Leading Rubber Works

TO THE AUTHOR OF

## "Crude Rubber and Compounding Ingredients."

MR. HENRY C. PEARSON, Editor THE INDIA RUBBER WORLD, New York - *Dear Mr. Pearson:*  
In my capacity as Chemist for the ——— Rubber Manufacturing Co., I have occasion at different times to use your book "**Crude Rubber and Compounding Ingredients**," as a reference, and I find that the information it contains is taken from actual experience with large rubber manufacturers, which information is more valuable than it is possible to get in laboratory experiments. I keep your book at hand for such reference.

Very sincerely yours,

August 23, 1904.

Chemist.

THE INDIA RUBBER PUBLISHING CO.,  
No. 150 Nassau Street, . . . . New York.

## Thermometers

We make thermometers especially adapted for all purposes in Rubber Manufacturing.

We have had years of experience and would be very glad to have you write us in regard to your requirements.

**THE HOHMAN & MAURER MFG CO.**  
ROCHESTER, N. Y., U. S. A.

CHICAGO, ILLINOIS, ENGLAND, NEW YORK, CITY

# LA FLORENCIA PLANTATION HAS EARNED DIVIDENDS FOR YEARS.

We are offering for sale plantation stock paying 7 per cent. semi-annual interest on cash and installment shares.

## INTEREST IS GUARANTEED

40 per cent. of our property is now under cultivation.

Write for literature and particulars to the

**Badger Mexican Plantation Company,**

Fourth Floor Robinson Building

Dept. "S"

RACINE, WIS.

On July 1, 1904, a 9 per cent. dividend was declared and paid on all outstanding stock.

*Mention The India Rubber World when you write.*



# J. H. LANE & CO.,

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HOSE  
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PAPER FELTS  
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ARMY DUCK  
OSNABURGSAUTOMOBILE  
AND BICYCLE

TIRE FABRICS

SHEETINGS AND DRILLS.

SEA ISLAND, EGYPTIAN, AND PEELER YARNS,

AND FABRICS IN REGULAR AND SPECIAL CONSTRUCTION.

*Mention The India Rubber World when you write.*

## Vacuum Drying Apparatus

FOR

Sheet and Reclaimed Rubber

EMIL PASSBURG SYSTEM

The Passburg (Patent) "VACUUM DRYING  
APPARATUS" is no experiment.They are installed in all of the principal rubber  
manufactories of Europe.200 chambers in daily operation drying rubber  
and rubber compounds.

Particulars upon application.

JOSEPH P. DEVINE,

314 Mooney-Brisbane Bldg.

BUFFALO, N. Y.

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## WHEN THE STURTEVANT SYSTEM IS EMPLOYED FOR DRYING RUBBER

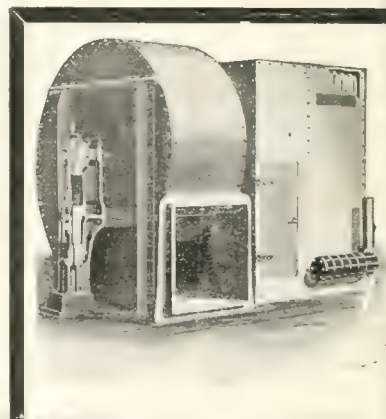
THE FORCED CIRCULATION OF WARM  
AIR REDUCES THE TIME BY 50%, IM-  
PROVES THE PRODUCT AND SIMPLIFIES  
THE PROCESS.The same system, giving  
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used for heating factory  
buildings, offices, etc.B. F. STURTEVANT  
COMPANY,

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NEW YORK. CHICAGO

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NEW JERSEY RUBBER COMPANY,

MANUFACTURERS OF ALL KINDS OF

RECLAIMED \* RUBBER,

Auxiliary Plant for Trimmings, daily Capacity of 20,000 Pounds. Total daily Capacity 45,000 Pounds.

Office and Factories, LAMBERTVILLE, NEW JERSEY.

*Mention The India Rubber World when you write.*

BONNER MANUFACTURING CO.,

MANUFACTURERS  
OF ALL GRADES

RUBBER SUBSTITUTES.

GOODS MADE TO ORDER A SPECIALTY.

OFFICE: No. 89 State Street,

BOSTON, MASS.

*Mention The India Rubber World when you write.*

B. F. Goodrich Co., Akron, O.  
N. J. Car Spring & Rubber Co., Jersey  
City.



## RUBBER BUYERS' DIRECTORY—CONTINUED.

## MECHANICAL GOODS.

## Fuller Balls—Continued.

Peerless Rubber Mfg. Co., New York.  
Republic Rubber Co., Youngstown, O.  
Whitman & Barnes Mfg. Co., Akron, O.

## Gage Glass Washers.

Boston Belting Co., Boston, Mass.  
Cleveland Rubber Co., Cleveland, O.  
Empire Rubber Mfg. Co., Trenton, N. J.  
Home Rubber Co., Liverpool, Eng.  
Laverpool Rubber Co., Liverpool, Eng.  
Manhattan Rubber Mfg. Co., New York.  
Mechanical Rubber Co., Chicago, Ill.  
N. J. Car Spring & Rubber Co., Jersey City, N. J.  
New York Belting & Packing Co., N. Y.  
New York Rubber Co., New York.  
Revere Rubber Co., Boston, Mass.  
Jos. Stokes Rubber Co., Trenton, N. J.  
Voorhees Rubber Mfg. Co., Jersey City, N. J.

## Gas-Bags (Rubber).

Cleveland Rubber Co., Cleveland, O.  
Davol Rubber Co., Providence, R. I.  
B. F. Goodrich Co., Akron, O.  
Liverpool Rubber Co., Liverpool, Eng.  
N. J. Car Spring & Rubber Co., Jersey City, N. J.  
Peerless Rubber Mfg. Co., New York.  
Tyer Rubber Co., Andover, Mass.  
Voorhees Rubber Mfg. Co., Jersey City

## Gasket Tubing.

Jenkins Bros., New York.

## Grain Drill Tubes.

Boston Belting Co., Boston-New York.  
Republic Rubber Co., Youngstown, O.  
Whitman & Barnes Mfg. Co., Akron, O.

## Hat Bags.

Boston Belting Co., Boston.  
Home Rubber Co., Trenton, N. J.  
Manhattan Rubber Mfg. Co., New York  
Mattson Rubber Co.  
Mechanical Rubber Co., Chicago.  
N. J. Car Spring & Rubber Co., Jersey City, N. J.  
New York Belting & Packing Co., N. Y.  
New York Rubber Co., New York.  
Peerless Rubber Mfg. Co., New York.  
Republic Rubber Co., Youngstown, O.  
Revere Rubber Co., Boston.

## Horse Shoe Pads.

Peerless Rubber Mfg. Co., New York.  
Plymouth Rubber Co., Stoughton, Mass.  
Revere Rubber Co., Boston-New York.  
Voorhees Rubber Mfg. Co., Jersey City  
Whitman & Barnes Mfg. Co., Akron, O.

## Hose—Armored.

Boston Belting Co., Boston-New York.  
B. F. Goodrich Co., Akron, O.  
N. J. Car Spring & Rubber Co., Jersey City.  
Peerless Rubber Mfg. Co., New York.  
Republic Rubber Co., Youngstown, O.  
Revere Rubber Co., Boston-New York.  
Voorhees Rubber Mfg. Co., Jersey City

## Hose Couplings.

Boston Woven Hose & Rubber Co.

## Hose Fittings.

Boston Woven Hose & Rubber Co.

## Hose Linings.

Boston Belting Co., Boston-New York.  
Boston Woven Hose & Rubber Co.  
Empire Rubber Mfg. Co., Trenton, N. J.  
Eureka Rubber Mfg. Co., Trenton, N. J.  
N. J. Car Spring & Rubber Co., Jersey City, N. J.  
Peerless Rubber Mfg. Co., New York.

## Hose Nozzles.

Boston Woven Hose & Rubber Co.

## Hose—Protected.

Boston Belting Co., Boston-New York.  
Revere Rubber Co., Boston-New York.  
Voorhees Rubber Mfg. Co., Jersey City.

## Hose Racks.

Wirt & Knox Mfg. Co., Philadelphia.

## Hose Reels.

Wirt & Knox Mfg. Co., Philadelphia.

## MECHANICAL GOODS.

## Hose—Rubber Lined.

## COTTON AND LINEN.

Boston Belting Co., Boston-New York  
Boston Woven Hose & Rubber Co.  
Cleveland Rubber Co., Cleveland, O.  
Empire Rubber Mfg. Co., Trenton, N. J.  
Eureka Fire Hose Co., New York.  
Eureka Rubber Mfg. Co. of Trenton.  
B. F. Goodrich Co., Akron, O.  
Gutta Percha & Rubber Mfg. Co., N. Y.  
Gutta Percha and Rubber Mfg. Co. of Toronto.  
Home Rubber Co., Trenton, N. J.  
Manhattan Rubber Mfg. Co., New York.  
N. J. Car Spring & Rubber Co., Jersey City, N. J.  
New York Belting & Packing Co., N. Y.  
Peerless Rubber Mfg. Co., New York.  
Republic Rubber Co., Youngstown, O.  
Revere Rubber Co., Boston.  
Jos. Stokes Rubber Co., Trenton, N. J.  
Voorhees Rubber Mfg. Co., Jersey City.  
Whitman & Barnes Mfg. Co., Akron, O.

## Hose—Submarine.

Boston Belting Co., Boston-New York.  
B. F. Goodrich Co., Akron, O.  
Republic Rubber Co., Youngstown, O.

## Hose—Wire Wound.

Boston Belting Co., Boston-New York.  
Boston Woven Hose & Rubber Co.  
B. F. Goodrich Co., Akron, O.  
N. J. Car Spring & Rubber Co., Jersey City.  
Peerless Rubber Mfg. Co., New York.  
Republic Rubber Co., Youngstown, O.  
Revere Rubber Co., Boston.

## "Jenkins '96" Packing.

Jenkins Bros., New York.

## Lawn Sprinklers.

Boston Woven Hose & Rubber Co.

## Mallets (Rubber).

Boston Belting Co., Boston-New York.  
B. F. Goodrich Co., Akron, O.  
Peerless Rubber Mfg. Co., New York.  
Revere Rubber Co., Boston-New York.

## Mould Work.

[See Mechanical Rubber Goods.]  
Davidson Rubber Co., Boston.  
Davol Rubber Co., Providence, R. I.  
Faultless Rubber Co., Akron, O.  
Hardman Rubber Co., Belleville, N. J.  
Hodgman Rubber Co., New York.  
La Crosse (Wis.) Rubber Mills Co.  
Mattson Rubber Co., New York.  
National India Rubber Co., Bristol, R. I.  
Plymouth Rubber Co., Stoughton, Mass.  
Tyer Rubber Co., Andover, Mass.

## "Nubian" Packing.

Voorhees Rubber Mfg. Co., Jersey City.

## Oil Well Supplies.

Boston Belting Co., Boston-New York.  
Boston Woven Hose & Rubber Co.  
B. F. Goodrich Co., Akron, O.  
Lake Shore Rubber Co., Erie, Pa.  
N. J. Car Spring & Rubber Co., Jersey City.  
Peerless Rubber Mfg. Co., New York.  
Republic Rubber Co., Youngstown, O.  
Revere Rubber Co., Boston-Pittsburgh  
Voorhees Rubber Mfg. Co., Jersey City  
Whitman & Barnes Mfg. Co., Akron, O.

## Paper Machine Rollers.

Boston Belting Co., Boston-New York  
B. F. Goodrich Co., Akron, O.  
Republic Rubber Co., Youngstown, O.  
Revere Rubber Co., Boston-New York.  
Peerless Rubber Mfg. Co., New York.  
Voorhees Rubber Mfg. Co., Jersey City

## "Perfection" Belting.

Boston Woven Hose & Rubber Co.

## Plumbers' Supplies.

B. F. Goodrich Co., Akron, O.  
Republic Rubber Co., Youngstown, O.

## Pump Buckets.

B. F. Goodrich Co., Akron, O.  
Peerless Rubber Mfg. Co., New York.  
Republic Rubber Co., Youngstown, O.

## Pump Valves.

Jenkins Bros., New York.

## MECHANICAL GOODS.

## "Rainbow" Packing.

Peerless Rubber Mfg. Co., New York.

## Reels—Hose.

Boston Belting Co., Boston-New York.  
Boston Woven Hose & Rubber Co.  
Peerless Rubber Mfg. Co., New York.  
Republic Rubber Co., Youngstown, O.

## Rings.

Boston Belting Co., Boston-New York.  
B. F. Goodrich Co., Akron, O.  
Peerless Rubber Mfg. Co., New York.  
Plymouth Rubber Co., Stoughton, Mass.  
Republic Rubber Co., Youngstown, O.

## Rollers—Rubber Covered.

Boston Belting Co., Boston.  
Cleveland Rubber Co., Cleveland, O.  
Empire Rubber Mfg. Co., Trenton, N. J.  
Eureka Rubber Mfg. Co. of Trenton.  
B. F. Goodrich Co., Akron, O.  
Home Rubber Co., Trenton, N. J.  
Manhattan Rubber Mfg. Co., New York  
Mechanical Rubber Co., Chicago.  
N. J. Car Spring & Rubber Co., Jersey City, N. J.  
New York Belting & Packing Co., N. Y.  
Peerless Rubber Mfg. Co., New York.  
Plymouth Rubber Co., Stoughton, Mass.  
Republic Rubber Co., Youngstown, O.  
Revere Rubber Co., Boston-New York.

## Sewing Machine Rubbers.

B. F. Goodrich Co., Akron, O.

## Springs—Rubber.

Boston Belting Co., Boston-New York.  
B. F. Goodrich Co., Akron, O.  
Hardman Rubber Co., Belleville, N. J.  
Liverpool Rubber Co., Liverpool, Eng.  
N. J. Car Spring & Rubber Co., Jersey City.  
Peerless Rubber Mfg. Co., New York.  
Plymouth Rubber Co., Stoughton, Mass.  
Republic Rubber Co., Youngstown, Ohio.  
Revere Rubber Co., Boston-New York.  
Voorhees Rubber Mfg. Co., Jersey City.

## Stair Treads.

Boston Belting Co., Boston-New York.  
Boston Woven Hose & Rubber Co.  
Cleveland Rubber Co., Cleveland, O.  
Empire Rubber Mfg. Co., Trenton, N. J.  
Home Rubber Co., Trenton, N. J.  
Liverpool Rubber Co., Liverpool, Eng.  
Manhattan Rubber Mfg. Co., New York  
N. J. Car Spring & Rubber Co., Jersey City, N. J.  
New York Belting & Packing Co., N. Y.  
New York Rubber Co., New York.  
Peerless Rubber Mfg. Co., New York.  
Republic Rubber Co., Youngstown, O.  
Revere Rubber Co., Boston-New York.  
Voorhees Rubber Mfg. Co., Jersey City.

## Thread.

Mechanical Fabric Co., Providence, R. I.  
Revere Rubber Co., Boston.

## Tiling.

B. F. Goodrich Co., Akron, O.  
Gutta Percha & Rubber Mfg. Co., N. Y.  
N. J. Car Spring & Rubber Co., Jersey City.  
New York Belting & Packing Co., N. Y.  
Peerless Rubber Mfg. Co., New York.  
Republic Rubber Co., Youngstown, Ohio  
Voorhees Rubber Mfg. Co., Jersey City.

## Tires.

## BICYCLE AND CARRIAGE.

Continental Caoutchouc & Guttapercha Co., Hanover.  
Empire Rubber Mfg. Co., Trenton, N. J.  
B. F. Goodrich Co., Akron, O.  
Gutta Percha & Rubber Mfg. Co., Toronto.  
Kokomo Rubber Co., Kokomo, Ind.  
Lake Shore Rubber Co., Erie, Pa.  
Liverpool Rubber Co., Liverpool, Eng.  
North British Rubber Co., Ltd., Edinburgh.  
Plymouth Rubber Co., Stoughton, Mass.  
Republic Rubber Co., Youngstown, O.

## CARRIAGE.

Boston Belting Co., Boston-New York.  
Revere Rubber Co., Boston-New York.

## MECHANICAL GOODS.

## Truck Bands.

Boston Belting Co., Boston.  
Cleveland Rubber Co., Cleveland, O.  
Empire Rubber Mfg. Co., Trenton, N. J.  
B. F. Goodrich Co., Akron, O.  
Home Rubber Co., Trenton, N. J.  
Manhattan Rubber Mfg. Co., New York.  
Mechanical Rubber Co., Chicago.  
N. J. Car Spring & Rubber Co., Jersey City, N. J.  
New York Belting & Packing Co., N. Y.  
Peerless Rubber Mfg. Co., New York.  
Republic Rubber Co., Youngstown, O.  
Voorhees Rubber Mfg. Co., Jersey City.  
Whitman & Barnes Mfg. Co., Akron, O.

## Tubing.

[See Mechanical Rubber Goods.]  
American Hard Rubber Co., New York.  
Davidson Rubber Co., Boston.  
Davol Rubber Co., Providence, R. I.  
Hardman Rubber Co., Belleville, N. J.  
Plymouth Rubber Co., Stoughton, Mass.  
Tyer Rubber Co., Andover, Mass.

## Tubing (Beer).

Boston Belting Co., Boston-New York.  
Boston Woven Hose & Rubber Co.  
B. F. Goodrich Co., Akron, O.  
Peerless Rubber Mfg. Co., New York.  
Plymouth Rubber Co., Stoughton, Mass.  
Republic Rubber Co., Youngstown, O.  
Voorhees Rubber Mfg. Co., Jersey City.

## "Usudurian" Packing.

Revere Rubber Co., Boston-New York.

## Valve Balls.

Boston Belting Co., Boston.  
Cleveland Rubber Co., Cleveland, O.  
Manhattan Rubber Mfg. Co., New York  
Mechanical Rubber Co., Chicago.  
New York Belting & Packing Co., N. Y.  
New York Rubber Co., New York.  
Peerless Rubber Mfg. Co., New York.  
Republic Rubber Co., Youngstown, O.  
Whitman & Barnes Mfg. Co., Akron, O.

## Valve Discs.

American Hard Rubber Co., New York.  
Boston Belting Co., Boston-New York.  
B. F. Goodrich Co., Akron, O.  
Peerless Rubber Mfg. Co., New York.  
Republic Rubber Co., Youngstown, O.  
Revere Rubber Co., Boston-New York.

## Valves.

[See Mechanical Rubber Goods.]  
Jenkins Bros., New York-Chicago.  
Plymouth Rubber Co., Stoughton, Mass.

## Wringer Rolls.

Cleveland Rubber Co., Cleveland, O.  
B. F. Goodrich Co., Akron, O.  
Republic Rubber Co., Youngstown, O.

## DRUGGISTS' AND STATIONERS' SUNDRIES

## Atomizers.

## Bandages.

## Bulbs.

## Water Bottles.

## Druggists' Sundries—General.

American Hard Rubber Co., New York.  
O. J. Bailey & Co., Boston.  
Geo. Borgfeldt & Co., New York.  
Cleveland Rubber Co., Cleveland, O.  
Davidson Rubber Co., Boston.  
Davol Rubber Co., Providence, R. I.  
Faultless Rubber Co., Akron, O.  
B. F. Goodrich Co., Akron, O.  
Hanover Rubber Co., Hanover, Germany.  
Hardman Rubber Co., Belleville, N. J.  
Hodgman Rubber Co., New York.  
North British Rubber Co., Ltd., Edinburgh.  
Tyer Rubber Co., Andover, Mass.

## Balls, Dolls and Toys.

Continental Caoutchouc & Guttapercha Co.  
New York Rubber Co., New York.  
Whitman & Barnes Mfg. Co., Akron, O.



## RUBBER BUYERS' DIRECTORY—CONTINUED.

## DRUGGISTS' SUNDRIES

## Combs.

American Hard Rubber Co., New York.  
Geo. Borgfeldt & Co., New York.  
Hanover Rubber Co., Hanover, Germany.

## Elastic Bands.

Davidson Rubber Co., Boston.  
Davol Rubber Co., Providence, R. I.  
B. F. Goodrich Co., Akron, O.  
Hodgman Rubber Co., New York-Boston.  
Tyer Rubber Co., Andover, Mass.  
Whitman & Barnes Mfg. Co., Akron, O.

## Erasive Rubbers.

Davidson Rubber Co., Boston.  
B. F. Goodrich Co., Akron, O.  
Hardman Rubber Co., Belleville, N. J.  
Mattson Rubber Co., New York.

## Finger Cots.

Faultless Rubber Mfg. Co., Akron, O.  
B. F. Goodrich Co., Akron, O.  
Pure Gum Specialty Co., Barberton, O.

## Gloves.

Davol Rubber Co., Providence, R. I.  
Faultless Rubber Co., Akron, O.  
B. F. Goodrich Co., Akron, O.  
Pure Gum Specialty Co., Barberton, O.

## Hard Rubber Goods.

American Hard Rubber Co., New York.  
Geo. Borgfeldt & Co., New York.  
Davol Rubber Co., Providence, R. I.  
Hanover Rubber Co., Hanover, Germany.  
Hardman Rubber Co., Belleville, N. J.  
Stokes Rubber Co., Joseph, Trenton, N. J.  
Tyer Rubber Co., Andover, Mass.

## Hospital Sheetings.

Cleveland Rubber Co., Cleveland, O.  
Davidson Rubber Co., Boston.  
Davol Rubber Co., Providence, R. I.  
Hodgman Rubber Co., New York.  
Plymouth Rubber Co., Stoughton, Mass.  
Tyer Rubber Co., Andover, Mass.

## Hot Water Bottles.

American Hard Rubber Co., New York.  
Cleveland Rubber Co., Cleveland, O.  
Davidson Rubber Co., Boston.  
Davol Rubber Co., Providence, R. I.  
B. F. Goodrich Co., Akron, O.  
Hardman Rubber Co., Belleville, N. J.  
Hodgman Rubber Co., New York-Boston.  
Tyer Rubber Co., Andover, Mass.

## Ice Bags.

B. F. Goodrich Co., Akron, O.  
Hodgman Rubber Co., New York.  
Pure Gum Specialty Co., Barberton, O.

## Ice Caps.

B. F. Goodrich Co., Akron, O.  
Hardman Rubber Co., Belleville, N. J.  
Pure Gum Specialty Co., Barberton, O.  
Tyer Rubber Co., Andover, Mass.

## Life Preservers.

Hodgman Rubber Co., New York.

## Mittens.

Davol Rubber Co., Providence, R. I.  
Faultless Rubber Co., Akron, O.

## Nipples.

Cleveland Rubber Co., Cleveland, O.  
Davidson Rubber Co., Boston.  
Davol Rubber Co., Providence, R. I.  
Faultless Rubber Co., Akron, O.  
B. F. Goodrich Co., Akron, O.  
Pure Gum Specialty Co., Barberton, O.  
Tyer Rubber Co., Andover, Mass.

## Notions.

American Hard Rubber Co., New York.  
Davidson Rubber Co., Boston.  
Tyer Rubber Co., Andover, Mass.

## Rulers.

American Hard Rubber Co., New York.

## Sponges (Rubber).

Faultless Rubber Co., Ashland, Ohio.  
B. F. Goodrich Co., Akron, O.

## Stationers' Sundries.

American Hard Rubber Co., New York.  
Geo. Borgfeldt & Co., New York.  
Cleveland Rubber Co., Cleveland, O.  
Davidson Rubber Co., Boston.  
Davol Rubber Co., Providence, R. I.

## DRUGGISTS' SUNDRIES.

## Stationers' Sundries—Continued.

B. F. Goodrich Co., Akron, O.  
Hanover Rubber Co., Hanover, Germany.  
Hardman Rubber Co., Belleville, N. J.  
Hodgman Rubber Co., New York-Boston.  
Tyer Rubber Co., Andover, Mass.

## Stopples (Rubber).

Cleveland Rubber Co., Cleveland, O.  
Davol Rubber Co., Providence, R. I.  
Hodgman Rubber Co., New York.  
Manhattan Rubber Mfg. Co., New York.  
New York Belting & Packing Co., N. Y.  
Tyer Rubber Co., Andover, Mass.  
Whitman & Barnes Mfg. Co., Akron, O.

## Surgical Appliances.

Faultless Rubber Co., Akron, O.

## Syringes.

American Hard Rubber Co., New York.  
Cleveland Rubber Co., Cleveland, O.  
Davol Rubber Co., Providence, R. I.  
B. F. Goodrich Co., Akron, O.  
Hardman Rubber Co., Belleville, N. J.  
Hodgman Rubber Co., New York.  
Tyer Rubber Co., Andover, Mass.

## Throat Bags.

Cleveland Rubber Co., Cleveland, O.  
Davol Rubber Co., Providence, R. I.  
B. F. Goodrich Co., Akron, O.  
Tyer Rubber Co., Andover, Mass.

## Tobacco Pouches.

B. F. Goodrich Co., Akron, O.  
Pure Gum Specialty Co., Barberton, O.  
Tyer Rubber Co., Andover, Mass.

## Toys.

Geo. Borgfeldt & Co., New York.  
B. F. Goodrich Co., Akron, O.  
Hanover Rubber Co., Hanover, Germany.

MACKINTOSHED  
AND SURFACE  
GOODS

## Air Goods (Rubber).

Cleveland Rubber Co., Cleveland, O.  
Davol Rubber Co., Providence, R. I.  
B. F. Goodrich Co., Akron, O.  
Hodgman Rubber Co., New York.  
New York Rubber Co., New York.  
National India Rubber Co., Providence.  
Tyer Rubber Co., Andover, Mass.

## Air Mattresses.

Mechanical Fabric Co., Providence, R. I.

## Aprons.

Hodgman Rubber Co., New York.

## Barbers' Bibs.

Davol Rubber Co., Providence, R. I.  
Tyer Rubber Co., Andover, Mass.

## Bathing Caps.

Davol Rubber Co., Providence, R. I.  
B. F. Goodrich Co., Akron, O.

## Bellows Cloths.

Boston Rubber Co., Boston.  
Cleveland Rubber Co., Cleveland, O.  
Hodgman Rubber Co., New York.  
La Crosse (Wis.) Rubber Mills Co.

## Calendering.

La Crosse (Wis.) Rubber Mills Co.  
Milford Rubber Co., Boston.  
Plymouth Rubber Co., Stoughton, Mass.

## Canoe Beds.

Hodgman Rubber Co., New York.

## Carriage Ducks and Drills.

Cleveland Rubber Co., Cleveland, O.  
Empire Rubber Mfg. Co., Trenton, N. J.  
Kureka Rubber Mfg. Co., of Trenton.  
Gutta Percha & Rubber Mfg. Co., Toronto.

## Clothing.

Apsley Rubber Co., Hudson, Mass.  
Cleveland Rubber Co., Cleveland, O.  
Granby Rubber Co., Granby, Quebec.  
Gutta Percha & Rubber Mfg. Co. of Toronto.  
Hodgman Rubber Co., New York.  
La Crosse (Wis.) Rubber Mills Co.  
North British Rubber Co., Ltd., Edinburgh.

## MACKINTOSHED GOODS.

## Cravenette.

Cravenette Co., Ltd.

## Diving Dresses.

Hodgman Rubber Co., New York.

## Dress Shields.

Hodgman Rubber Co., New York.  
Mattson Rubber Co., New York.

## Horse Covers.

Hodgman Rubber Co., New York.

## Leggings.

Cleveland Rubber Co., Cleveland, O.  
Hodgman Rubber Co., New York.

## Mackintoshes.

[See Clothing]

## Proofing.

La Crosse (Wis.) Rubber Mills Co.  
Milford Rubber Co., Boston.  
Plymouth Rubber Co., Stoughton, Mass.

## Rain Coats.

Cravenette Co., Ltd.

## Rubber Coated Cloths.

Mechanical Fabric Co., Providence, R. I.

RUBBER  
FOOTWEAR

## Boots and Shoes.

American Rubber Co., Boston.  
Apsley Rubber Co., Hudson, Mass.  
Boston Rubber Shoe Co., Boston.  
L. Candee & Co., New Haven, Ct.  
Granby Rubber Co., Granby, Quebec.  
Gutta Percha & Rubber Mfg. Co. of Toronto.  
Hood Rubber Co., Boston.  
Jersey Rubber Shoe Co., New York.  
Liverpool Rubber Co., Liverpool, Eng.  
Lycorning Rubber Co., Williamsport, Pa.  
Meyer Rubber Co., New York.  
National India Rubber Co., Boston.  
North British Rubber Co., Ltd., Edinburgh.  
United States Rubber Co., New York.  
Wales-Goodyear Rubber Co., Boston.  
Woonsocket Rubber Co., Providence.

## Heels and Soles.

Boston Woven Hose & Rubber Co.  
Continental Caoutchouc & Gutta-percha Co., Hanover.  
Plymouth Rubber Co., Stoughton, Mass.

## Tennis Shoes.

American Rubber Co., Boston.  
Boston Rubber Shoe Co., Boston.  
Granby Rubber Co., Granby, Quebec.  
Liverpool Rubber Co., Liverpool, Eng.  
National India Rubber Co., Providence.  
United States Rubber Co., New York.

## Tennis Soles.

Jos. Stokes Rubber Co., Trenton, N. J.

## Wading Pants.

Hodgman Rubber Co., New York.

SPORTING  
GOODS

## Foot Balls.

Cleveland Rubber Co., Cleveland, O.  
B. F. Goodrich Co., Akron, O.  
Hodgman Rubber Co., New York.

## Golf Balls.

Boston Belting Co., Boston.  
Davidson Rubber Co., Boston.  
B. F. Goodrich Co., Akron, O.  
Whitman & Barnes Mfg. Co., Akron, O.

## Submarine Outfits.

Hodgman Rubber Co., New York.

## Sporting Goods.

B. F. Goodrich Co., Akron, O.  
Hodgman Rubber Co., New York.  
Tyer Rubber Co., Andover, Mass.

## Striking Bags.

B. F. Goodrich Co., Akron, O.  
Pure Gum Specialty Co., Barberton, O.

DENTAL AND  
STAMP RUBBER

## Dental Gum.

American Hard Rubber Co., New York.  
Cleveland Rubber Co., Cleveland, O.  
Tyer Rubber Co., Andover, Mass.

## Rubber Dam.

Cleveland Rubber Co., Cleveland, O.  
Davol Rubber Co., Providence, R. I.  
Hodgman Rubber Co., New York.  
Tyer Rubber Co., Andover, Mass.

## Stamp Gum.

Mattson Rubber Co., New York.  
Mechanical Rubber Co., Chicago, Ill.  
N. J. Car Spring & Rubber Co., Jersey City, N. J.  
New York Belting & Packing Co., N. Y.

## ELECTRICAL

## Electrical Supplies.

American Hard Rubber Co., New York.  
Lake Shore Rubber Co., Erie, Pa.  
Joseph Stokes Rubber Co., Trenton, N. J.  
Massachusetts Chemical Co., Boston.  
Tyer Rubber Co., Andover, Mass.

## Friction Tape.

Boston Belting Co., Boston.  
Boston Woven Hose & Rubber Co.  
Cleveland Rubber Co., Cleveland, O.  
B. F. Goodrich Rubber Co., Akron, O.  
Massachusetts Chemical Co., Boston.  
Mechanical Rubber Co., Chicago.  
Home Rubber Co., Trenton, N. J.  
Revere Rubber Co., Boston-New York.  
Whitman & Barnes Mfg. Co., Akron, O.

## Hard Rubber Goods.

American Hard Rubber Co., New York.  
Joseph Stokes Rubber Co., Trenton, N. J.

## Insulating Compounds.

Gutta-Percha & Rubber Mfg. Co., Toronto.  
Massachusetts Chemical Co., Boston.

## Insulated Wire and Cables.

National India Rubber Co., Providence.

## Splicing Compound.

Home Rubber Co., Trenton, N. J.

## MISCELLANEOUS

## Architect and Engineer.

Herbert S. Kimball, Boston.

## Cable Code.

International Cable Directory Co., New York.

## Cement (Rubber).

Boston Belting Co., Boston.  
B. F. Goodrich Co., Akron, O.  
Manhattan Rubber Mfg. Co., New York.  
N. J. Car Spring & Rubber Co., Jersey City, N. J.  
New York Belting & Packing Co., N. Y.

## Chemical Analyses.

Durand Woodman, Ph D., New York.  
H. L. Terry, Manchester, England.

## Investments.

Badger Mexican Plantation Co., Racine, Wis.  
Conservative Rubber Production Co., San Francisco.  
Hidalgo Plantation and Commercial Co., San Francisco.

## Rubber Lands For Sale.

O. H. Harrison, San Francisco.

## Rubber Planting.

Badger Mexican Plantation Co., Racine, Wis.  
Conservative Rubber Production Co., San Francisco.  
Hidalgo Plantation and Commercial Co., San Francisco.

## Thermometers.

Hohmann & Maurer Mfg. Co., Rochester, N. Y.



## MACHINERY AND SUPPLIES FOR RUBBER MILLS.

RUBBER  
MACHINERY

## Acid Tanks.

Birmingham Iron Foundry, Derby, Ct.

## Ball Making Machine.

H. Bestopf, Hanover, Germany.

## Band Cutting Machine.

A. Adamson, Akron, O.

Birmingham Iron Foundry, Derby, Ct.

## Belt Folding Machines.

Birmingham Iron Foundry, Derby, Ct.

Farrel Foundry &amp; Mach. Co., Ansonia, Ct.

## Belt Slitters.

Birmingham Iron Foundry, Derby, Ct.

Farrel Foundry &amp; Mach. Co., Ansonia, Ct.

## Belt Stretchers.

Birmingham Iron Foundry, Derby, Ct.

Farrel Foundry &amp; Mach. Co., Ansonia, Ct.

Hoggson &amp; Pettis Mfg. Co., New Haven, Ct.

## Blowers.

B. F. Sturtevant Co., Boston.

## Boilers.

William R. Thropp, Trenton, N. J.

## Braiders.

New England Butt Co., Providence, R. I.

## Buckles.

The Weld Mfg. Co., Boston.

## Calenders.

Birmingham Iron Foundry, Derby, Ct.

Farrel Foundry &amp; Mach. Co., Ansonia, Ct.

Textile-Finishing Machinery Co., Providence, R. I.

## Castings.

A. Adamson, Akron, O.

Birmingham Iron Foundry, Derby, Ct.

Farrel Foundry &amp; Mach. Co., Ansonia, Ct.

## Chucks (Lathe).

Hoggson &amp; Pettis Mfg. Co., New Haven, Ct.

## Churns.

American Tool &amp; Machine Co., Boston.

## Cloth Dryers.

Birmingham Iron Foundry, Derby, Ct.

Farrel Foundry &amp; Mach. Co., Ansonia, Ct.

## Clutches.

Farrel Foundry &amp; Mach. Co., Ansonia, Ct.

## Crackers.

Birmingham Iron Foundry, Derby, Ct.

## Devulcanizers.

Birmingham Iron Foundry, Derby, Ct.

Edred W. Clark, Hartford, Ct.

William R. Thropp, Trenton, N. J.

## Dies.

Hoggson &amp; Pettis Mfg. Co., New Haven, Ct.

## Doubling Machines.

American Tool &amp; Machine Co., Boston.

## Drying Apparatus.

B. F. Sturtevant Co., Boston.

## Drying Machines.

Joseph P. Devine, Buffalo, N. Y.

Birmingham Iron Foundry, Derby, Ct.

Textile-Finishing Machinery Co., Providence, R. I.

## Dynamometers.

B. F. Sturtevant Co., Boston.

## Embossing Calenders.

Textile-Finishing Machinery Co., Providence, R. I.

## Engines.

B. F. Sturtevant Co., Boston.

William R. Thropp, Trenton, N. J.

## Engraving Roll.

Hoggson &amp; Pettis Mfg. Co., New Haven, Ct.

## Exhaust Fans and Heads.

B. F. Sturtevant Co., Boston.

## Factory Construction.

Herbert S. Kimball, Boston.

## Fans (Electric).

B. F. Sturtevant Co., Boston.

## Fans (Exhaust and Ventilating).

B. F. Sturtevant Co., Boston.

## Forges.

B. F. Sturtevant Co., Boston.

## Fuel Economizers.

B. F. Sturtevant Co., Boston.

## Gas Exhausters.

B. F. Sturtevant Co., Boston.

## RUBBER MACHINERY.

## Gearing.

Birmingham Iron Foundry, Derby, Ct.

Farrel Foundry &amp; Mach. Co., Ansonia, Ct.

## Generating Sets.

B. F. Sturtevant Co., Boston.

## Grinders.

Birmingham Iron Foundry, Derby, Ct.

Farrel Foundry &amp; Mach. Co., Ansonia, Ct.

William R. Thropp, Trenton, N. J.

## Hangers.

Farrel Foundry &amp; Mach. Co., Ansonia, Ct.

## Heating Apparatus.

B. F. Sturtevant Co., Boston.

## Hose Covering Machines.

New England Butt Co., Providence, R. I.

## Hose Making Machines.

Birmingham Iron Foundry, Derby, Ct.

## Hose Wrapping Machines.

A. Adamson, Akron, Ohio.

Birmingham Iron Foundry, Derby, Ct.

## Hydraulic Accumulators.

Birmingham Iron Foundry, Derby, Ct.

Farrel Foundry &amp; Mach. Co., Ansonia, Ct.

## Lasts (Rubber Shoe).

Middlesex Last Co., Boston.

## Lathes—Hard Rubber.

A. Adamson, Akron, Ohio.

## Jar Ring—Lathes.

A. Adamson, Akron, Ohio.

Birmingham Iron Foundry, Derby, Ct.

William R. Thropp, Trenton, N. J.

## Machinists' Tools.

Hoggson &amp; Pettis Mfg. Co., New Haven, Ct.

## Mechanical Draft.

B. F. Sturtevant Co., Boston.

## Mixers.

Birmingham Iron Foundry, Derby, Ct.

Farrel Foundry &amp; Mach. Co., Ansonia, Ct.

William R. Thropp, Trenton, N. J.

## Motors (Electric).

B. F. Sturtevant Co., Boston.

## Moulds.

A. Adamson, Akron, Ohio.

Birmingham Iron Foundry, Derby, Ct.

Hoggson &amp; Pettis Mfg. Co., New Haven, Ct.

## Pillow Blocks.

Farrel Foundry &amp; Mach. Co., Ansonia, Ct.

## Post Hangers.

Farrel Foundry &amp; Mach. Co., Ansonia, Ct.

## Presses (for Rubber Work.)

A. Adamson, Akron, O.

Birmingham Iron Foundry, Derby, Ct.

Boomer &amp; Boschert Press Co., Syracuse, N. Y.

Edred W. Clark, Hartford, Ct.

Farrel Foundry &amp; Mach. Co., Ansonia, Ct.

William R. Thropp, Trenton, N. J.

## Pumps.

Birmingham Iron Foundry, Derby, Ct.

Boomer &amp; Boschert Press Co., Syracuse, N. Y.

Farrel Foundry &amp; Mach. Co., Ansonia, Ct.

Racks for Boot and Shoe Cars.

Hoggson &amp; Pettis Mfg. Co., New Haven, Ct.

## Reducing Valves.

Mason Regulator Co., Boston.

## Rollers.

Birmingham Iron Foundry, Derby, Ct.

Farrel Foundry &amp; Mach. Co., Ansonia, Ct.

## Rollers (Hand).

Hoggson &amp; Pettis Mfg. Co., New Haven, Ct.

## Rubber Covering Machines.

New England Butt Co., Providence, R. I.

## Separators.

Turner, Vaughn &amp; Taylor Co., Cuyahoga Falls, Ohio.

## Shafting.

Birmingham Iron Foundry, Derby, Ct.

Farrel Foundry &amp; Mach. Co., Ansonia, Ct.

## Special Rubber Machinery.

Wellman Sole Cutting Machine Co., Medford, Mass.

## Spreaders.

American Tool &amp; Machine Co., Boston.

Birmingham Iron Foundry, Derby, Ct.

## Spreading Machines.

New England Butt Co., Providence, R. I.

## RUBBER MACHINERY.

## Steam Traps and Specialties.

Jenkins Bros., New York.

Mason Regulator Co., Boston.

B. F. Sturtevant Co., Boston.

## Steel Stamps.

Hoggson &amp; Pettis Mfg. Co., New Haven, Ct.

## Stitchers (Hand).

Hoggson &amp; Pettis Mfg. Co., New Haven, Ct.

## Strip Covering Machines.

New England Butt Co., Providence, R. I.

## Strip Cutters.

New England Butt Co., Providence, R. I.

## Thermometers.

Hohmann &amp; Maurer Mfg. Co., Rochester, N. Y.

## Tubing Machines.

A. Adamson, Akron, O.

Edred W. Clark, Hartford, Ct.

John Royle &amp; Sons, Paterson, N. J.

## Vacuum Drying Chambers.

Joseph P. Devine, Buffalo, N. Y.

## Varnishing Machines.

Birmingham Iron Foundry, Derby, Ct.

## Ventilating Fans.

B. F. Sturtevant Co., Boston.

## Vulcanizers.

Birmingham Iron Foundry, Derby, Ct.

Farrel Foundry &amp; Mach. Co., Ansonia, Ct.

William R. Thropp, Trenton, N. J.

## Washers.

Birmingham Iron Foundry, Derby, Ct.

Farrel Foundry &amp; Mach. Co., Ansonia, Ct.

William R. Thropp, Trenton, N. J.

Turner, Vaughn &amp; Taylor Co., Cuyahoga Falls, Ohio.

## Wire Insulating Machines.

New England Butt Co., Providence, R. I.

## Wrapping Machines.

A. Adamson, Akron, O.

Birmingham Iron Foundry, Derby, Ct.

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## FACTORY SUPPLIES.

## Drills.

J. H. Lane &amp; Co., New York.

## Duck (Cotton).

J. H. Lane &amp; Co., New York.

## Fossil Flour.

Fossil Flour Co., New York.

## Gilsonite.

Barber Asphalt Paving Co., Philadelphia.

## Gutta-Percha.

George A. Alden &amp; Co., Boston.

Rubber Trading Co., New York-Boston.

## Hose Bands, Straps &amp; Menders.

Boston Woven Hose &amp; Rubber Co.

William Yerdon, Fort Plain, N. Y.

## Hose Pipes, Nozzles &amp; Couplings.

Boston Woven Hose &amp; Rubber Co.

Kureka Fire Hose Co., New York.

Revere Rubber Co., Boston.

## Hydro-Carbon Products.

Geo. A. Alden &amp; Co., Boston.

Barber Asphalt Paving Co., Philadelphia.

## Infusorial Earth.

Stamford (Conn.) Rubber Supply Co.

## Lampblack.

Samuel Cabot, Boston.

## Lawn-Hose Supporters.

C. J. Bailey &amp; Co., Boston.

## Lead—Blue.

Picher Lead Co., Chicago, Ill.

## Lead—Sublimed White.

Picher Lead Co., Chicago, Ill.

## Naphtha.

Barrett Mfg. Co., Philadelphia.

## Oils.

Akron Commercial Co., Akron, O.

## Paris White and Whiting.

H. F. Taintor Mfg. Co., New York.

## Reclaimed Rubber.

Bloomington (N. J.) Soft Rubber Co.

Housatonic Rubber Wks., Bridgeport, Ct.

New Jersey Rubber Co., Lambertville, N. J.

Pequanoe Rubber Co., Butler, N. J.

Philadelphia Rubber Wks., Philadelphia.

Jos. Stokes Rubber Co., Trenton, N. J.

U. S. Rubber Reclaiming Wks., N. Y.

AGENTS AND DEALERS.

G. Brice, Paris, France.

W. C. Coleman Co., Setauket, N. Y.

# THE REPUBLIC RUBBER CO.

MAIN OFFICE AND FACTORY  
YOUNGSTOWN, OHIO

PITTSBURGH  
106 MARKET ST.

NEW YORK  
47 WARREN ST.

ST. LOUIS  
210 N. THIRD ST.

CHICAGO  
116 LAKE ST.

THE FINEST AND MOST MODERN  
RUBBER FACTORY IN THE WORLD

PATENTEES AND SOLE MANUFACTURERS

## SEARCHLIGHT PACKING

CROSS ARM      WIRE INSERTION  
COPPER JOINT      TUBULAR GASKET

*Mention The India Rubber World when you write.*

# HIDALGO

A RUBBER AND COFFEE INVESTMENT  
PAYING SIX PER CENT. INTEREST  
ON INSTALLMENT AND CASH SHARES

This Company is under the same management which has made  
*La Zacualpa Rubber Plantation* an acknowledged success.

FOR PARTICULARS AND PRINTED MATTER ADDRESS

## HIDALGO PLANTATION AND COMMERCIAL COMPANY

713 MARKET STREET, SAN FRANCISCO, CALIFORNIA

*Mention the India Rubber World when you write*



# REVERE RUBBER COMPANY.

Manufacturers of a  
HIGH CLASS of 

## MECHANICAL RUBBER GOODS.

### HOME OFFICE:

77 Bedford and 72 Kingston Streets,  
BOSTON, MASSACHUSETTS.

### BRANCHES:

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PITTSBURG, PA., 2-8 Wood Street  
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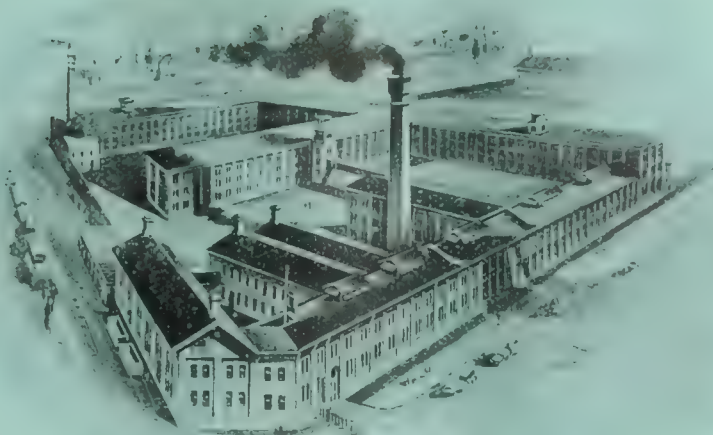
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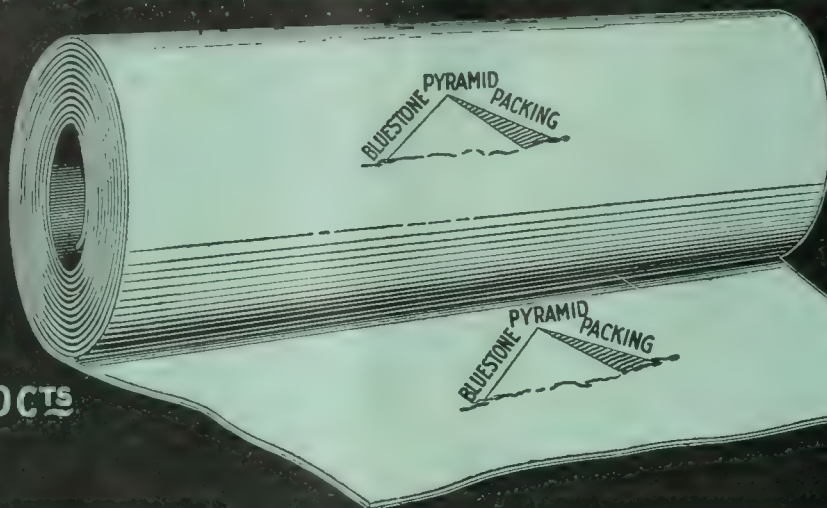
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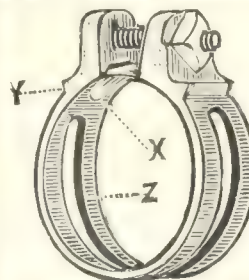
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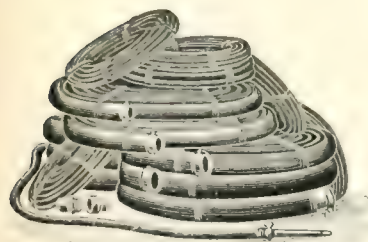
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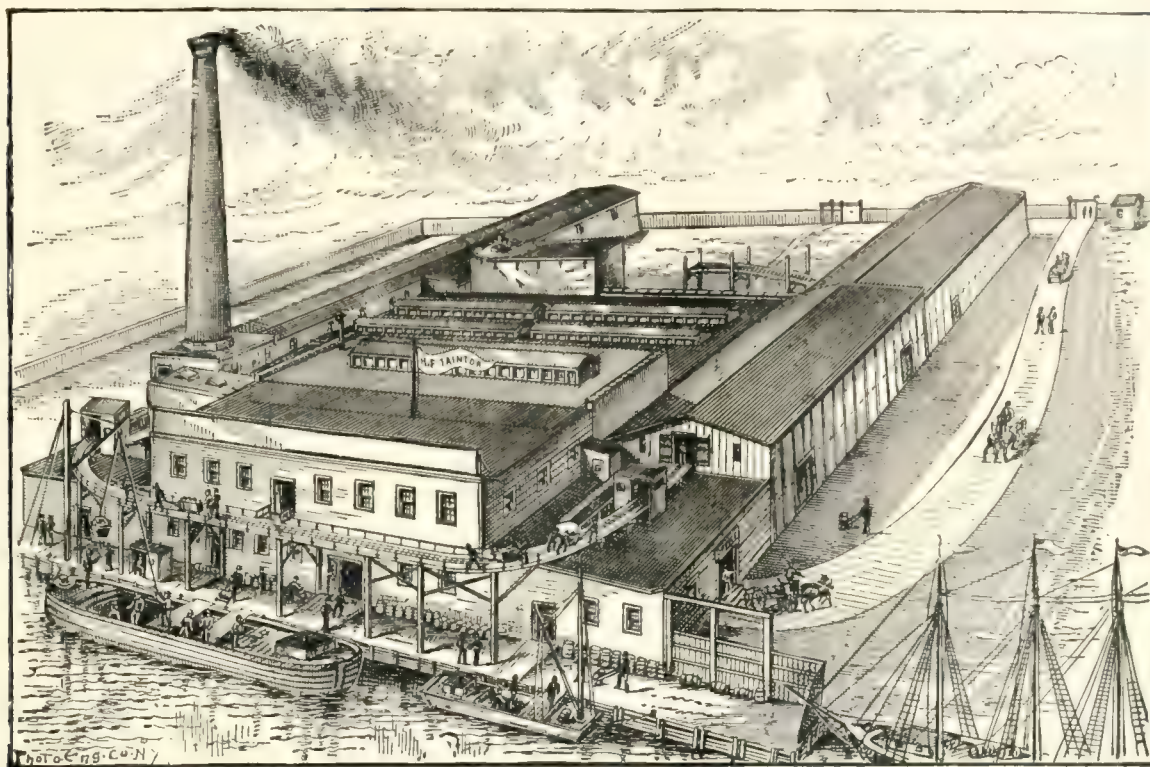


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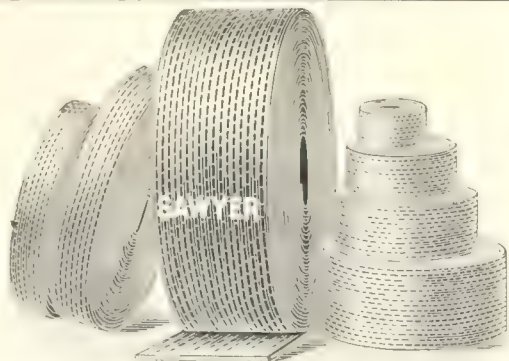
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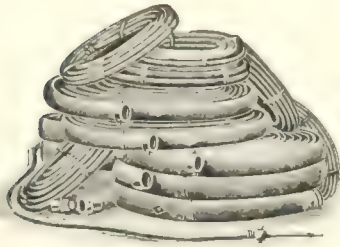
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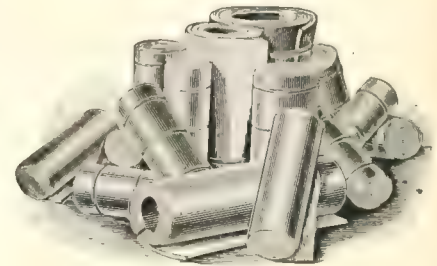
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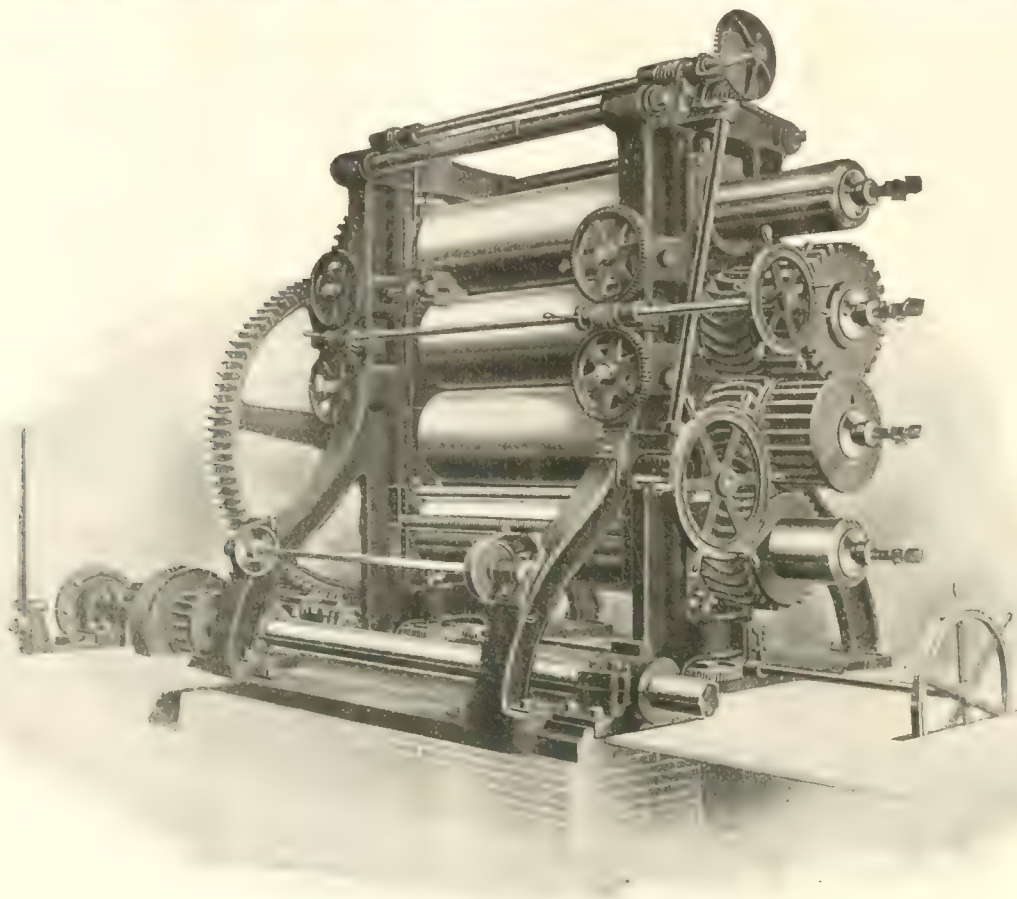
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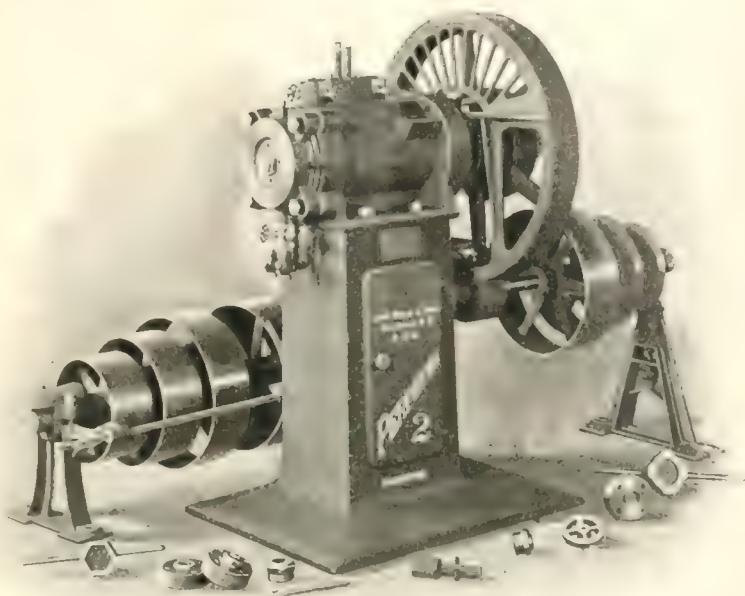
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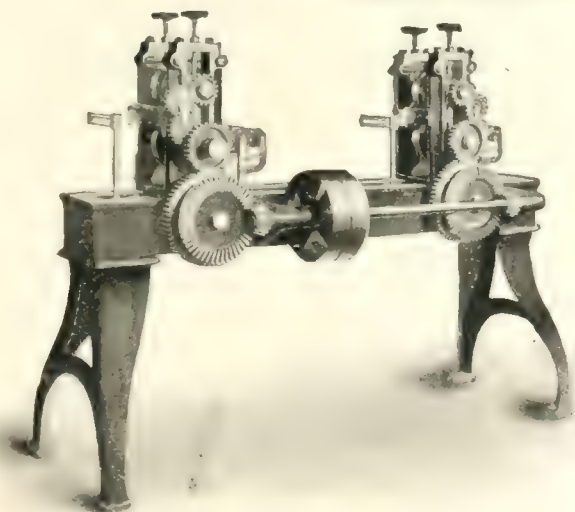
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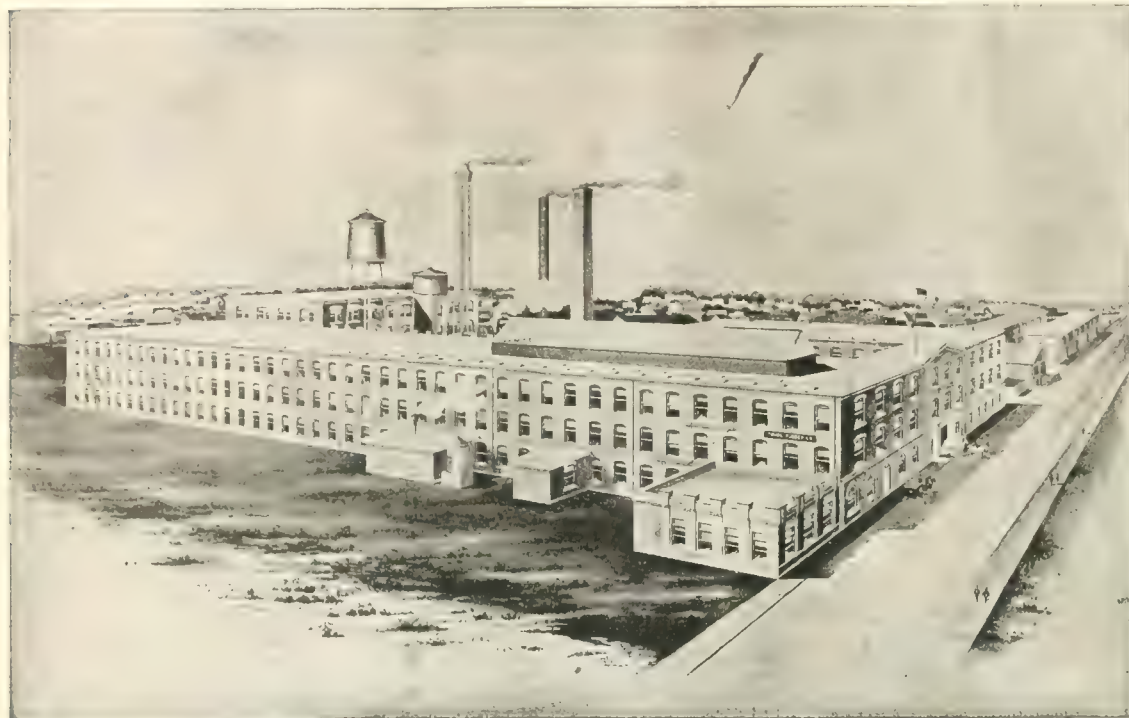
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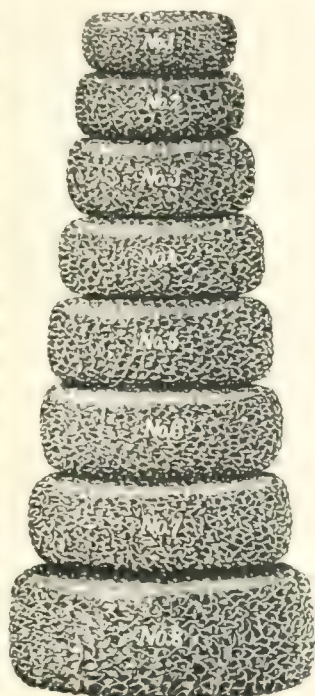
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He's a great friend of the rubber dealer—so get in with him. When school opens put your boys' and girls' sizes in the window, with something catchy, say, the red "Boston" banner, to get the boys and girls around, so that they will go home and talk rubbers at the supper table.

Cultivate the school children—they're worth it, but be fair with them. Give them the best children's rubbers you can get.

And when the word "best" is used in talking of rubbers, don't you instinctively think of rubbers that bear this trade mark—the trade mark that has been stamped on three times as many rubbers as have ever borne any other brand since rubber making began.



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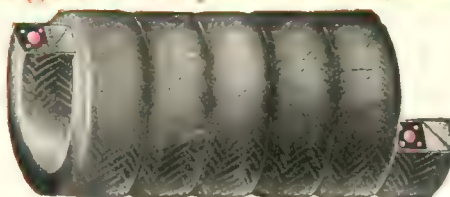
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## POLITICS AND BUSINESS.

WITHIN a week from this date the quadrennial national election will have occurred in the United States, and a certain feeling of suspense will have been lifted from millions of minds. But while the number of ballots to be registered on November 8 doubtless will be as large as at any preceding election—and possibly much larger, in view of the increase in population—there has been apparent no such popular excitement over the impending result as to disturb business in any way. Time was when it was regarded as a matter of course that a presidential campaign would rob business of all life for half a year, at least. True, there has never been any logical reason given why the choice of a president should be an occasion for stagnation in trade, but if the whole population decided in advance that the campaign months were to be a dull season, except in a political sense, the dullness very naturally developed.

This year appears to have afforded an exception to a rule which has been recognized for the past two generations. It cannot be said that the popular interest in politics, has declined, or that the business classes or the masses are really less concerned than in the past about the outcome of the election. But in a country like this popular sentiment ought to be, and doubtless is, more intelligent as public institutions advance in age, and most citizens nowadays do not fear any revolutionary tendency as a possible result of a general election.

Even when one political party supersedes another in control of the government, a radical change in policies rarely occurs, and a change in governmental methods is practically impossible within the limits of a single presidential term. The fact is that the government of the United States is vastly more conservative than is always recognized, either at home or abroad, and no matter what theories may be urged here or there in advance of an election, the government in power may be expected always to be responsive to the soundest business sense of the country as a whole whenever questions of vital importance are to be decided.

It is not to be assumed that the foregoing considerations, in so many words, have found place in the minds of all the voters in the country, but at any rate experience has taught those who have voted a few times that, whoever wins at the polls, the country is not brought to disaster. Hence, it is not necessarily a sign of apathy or a lack of patriotism if the average voter of to-day fails to feel alarm over the fate of the nation at the approaching election. Doubtless party feeling is as strong as ever, and, as we have intimated, the approaching vote may be the largest ever cast, but politics has not been allowed to occupy the minds of the people to the exclusion of business.

We feel that the situation is one upon which the people of the country are to be congratulated, as affording a vindication of the principles on which the government is founded. And doubtless the experience of the past summer will be repeated in future "presidential" years—a



matter of great gain to the country, which in an earlier period gave up one year in four to troubled suspense while awaiting the result of the November balloting.

So far as can be discerned at this time of the year, the rewards of production in every department have compared favorably with the showing of any past year. Crops of every kind appear to have been abundant, and selling prices favorable; manufacturing in every branch has been well maintained; and in whatever tends to enhance the wealth of the nation or to promote the prosperity of its citizens, 1904 seems destined to make a good record. Such being the situation to-day, a change can hardly come until there is a season of less abundant crops, or some unforeseen disaster overtakes industry. Present material conditions are not to be changed by any mere chance of political fortune, for which reason the purely trade journal, such as ours is, can well afford to leave to others the discussion of political platforms and candidates, feeling confident that in the end the intelligence of the people may always be depended on.

#### RUBBER AND THE CONGO QUESTION.

THE report that the president of the United States had decided not to attempt to interfere with respect to the administration of the Congo Free State appears to have been due to a misapprehension, but such a decision, in our opinion, would be wholly proper. The interest of this country in Congo affairs, from whatever point of view open to Mr. Roosevelt, we conceive to be much less substantial than that of the European powers identified with the Berlin treaty, and so long as the latter remain silent, the United States have no clear call to initiate the reforms for which a need is alleged to exist. Such action as has been erroneously reported from Washington would serve to nullify the work of the two recent distinguished English visitors on our shores—Mr. Morel, to attack, and Mr. Head, to defend, the administration of Leopold II, the sovereign of the Congo state. It might have the further effect of softening the asperity with which the Congo controversy has been waged beyond the Atlantic, by leaving neither side any reason to expect support from America. To this extent the effort to carry the war into this country would, in the end, prove productive of good.

Comment upon the purely political aspects of the Congo controversy is beyond the scope of THE INDIA RUBBER WORLD. We do not even know whether there is, or is not, a basis for the charge that commercial rather than humane motives have inspired what is called on the Continent the "British campaign" against the king of the Belgians. Our only reason for touching upon the matter at all is that it relates to a region which has become an important source of India-rubber supplies, and the effect of the administration of the Free State upon rubber production is a matter of interest alike to the United States and every other country where the Congo product is consumed. And in forming the views expressed below, we are not conscious of having been influenced by any "reform" or commercial or other organization in England or elsewhere.

The rate of increase in the production of rubber in the Congo Free State was for several years unprecedented in any country. Whereas, before the establishment of the State, practically no rubber had been exported from that region, the output soon attained the large volume of 13,250,000 pounds for a single year. This was produced almost wholly by the labor of natives, not before accustomed to sustained or continuous work of any kind, and supposed to be disinclined to all forms of industry. It is inconceivable that millions of these almost uncivilized blacks should suddenly, of their own accord, rush to the forests to extract rubber—for uses unknown to them, by foreign peoples whose very existence they were not aware of. Only extraordinary promises of compensation for their work could be expected to lead such simple minded folk to engage willingly in gathering rubber. But proof is lacking that even living wages are paid to the Congolese. The published official statistics of imports on the Congo fail to indicate any fair return to the natives for their work in preparing the great quantities of rubber sent out, and the fact that people in such circumstances exert themselves on so great a scale for practically no tangible compensation might readily give rise to reports that armed force is the real incentive.

It certainly is pertinent to ask whether these conditions are favorable to the proper conservation of the rubber plants, without which the supply must ultimately cease, leaving the commerce of the Congo Free State, as now organized, without any basis. The Congo exports have shown a falling off since 1901, although rubber from that source shared in the general advance in price which has stimulated the extraction of rubber in other parts of the world. What concerns the rubber manufacturers, therefore, is not such questions regarding the Congo as have been debated in the British and Belgian parliaments, or such memorials as that presented at Washington. The question is whether the responsible heads of the Congo government are supporting or conniving at a policy of unnecessary exhaustion of important supplies of a much needed raw material.

#### "A STRANGE INDUSTRY" DISCOVERED.

THE able Brooklyn *Eagle* has suddenly made the surprising discovery that there is "value in old rubbers." But it is a bold assertion to make, that "Not one in a thousand New Yorkers is aware that one of the big industries of this country is the importation of old rubber shoes and goloshes." The latest official estimate of the population of the city (August 1, 1904) is 3,838,024. Is it not possible that two in a thousand of all these people suspect the truth?

Our contemporary thus explains why it remained so long in ignorance of an important commercial movement:

This importation has been going on for several years, and yet it has seemingly never attracted the attention of the alert chroniclers of interesting events, for the old shoes and goloshes have slipped into the country silently, hidden away on the manifests of the steamships and quickly sent to the consignees, who have eagerly paid the freight.

If these consignees had not been so eager to pay the freight, possibly three in a thousand New Yorkers might have been in the secret by this time.

The *Eagle* next tells us that "Primarily the cause for this strange industry is the ever-increasing demand for rubber in America." This certainly is clear enough, but what are we to understand from what follows: "The old rubber shoes come in bales, thousands of them every week, for the home consumption in Europe is not one-tenth of what it is in America." Does it mean that if the European consumption of rubber were larger, old rubber shoes from there might come in carboys instead of bales?

We cannot agree with our contemporary, however, that "All the old rubber shoes are gathered and shipped to Liverpool, which is, so far, the only shipping point from which the rubber has come to this side." Isn't Hamburg a "shipping point"? Or Odessa?

AFTER HEARING FOR MANY MONTHS of an incredible number of "rubber factories" starting, or about to start, in Colorado, the old established manufacturers in the Eastern states, who have been trembling at the prospect of increased competition, doubtless will feel relieved to learn that the whole thing, after all, possibly may have been a joke. The two extracts from able Colorado newspapers which follow may serve to throw a great light upon the subject:

## I.

FROM THE LA VETA ENTERPRISE.

THE Alamosa *Independent Journal* of last week tells what Alamosa has in the way of business and what they want. One thing they want is a rubber factory. La Veta can beat Alamosa on that point, as every time a pretty girl goes down the street several rubber factories can be seen at work.

## II.

[FROM THE ALAMOSA INDEPENDENT JOURNAL, SEPTEMBER 1.]

THAT'S right, brother; you can beat us, because Alamosa girls are all pretty and the boys' necks are about worn out. That's the reason we want a rubber factory.

Whatever may happen in other Colorado rubber centers, it does not appear likely that the old concerns have much to fear from the "rubber factories" of La Veta and Alamosa.

THE OPENING OF CABLE COMMUNICATION TO ALASKA is another triumph for the India-rubber industry of the United States. When ocean cables first began to be planned the United States, comparatively speaking, were rich in nothing but territorial possessions. The people of this country were busy in subjugating a virgin soil, covered for the most part with a heavy forest growth, to cultivation, and establishing new towns along the lines of new railways built with the aid of capital borrowed from Europe—and since repaid. The domestic requirements in the way of rubber goods were, it is true, supplied by home factories, but in no case did this call for such command of capital, by a single factory, as was involved in the building of ocean cables. Moreover, the American people were not then accustomed to making large investments abroad, such as would be required in large cable building operations. Hence the building of cables was allowed to proceed without much attention being paid to the subject on this side of the Atlantic. Recently, however, some American manufacturers have become determined to have a hand in submarine cable building, and within a short time they have constructed a greater length than would be required to cross the Atlantic twice, and the new cables are in successful operation. When the history of the new line to Alaska is written, it will be a story of overcoming difficulties unique in electrical engineering, and this in a country which took up cable building fifty years later than our competitors in Europe. Last, but not least in point of interest, is the fact that the new cable lines

constructed in America are all rubber insulated, which fact may go far in rendering the world, in days to come, independent of Gutta-percha in cable construction.

### "CEARA RUBBER" IN NICARAGUA.

THE Nicaragua Rubber Co. was incorporated August 25, 1904, under the laws of New Jersey, to develop rubber plantations in the republic of Nicaragua and elsewhere. The company has been organized by the election of John E. Foster, of Corinto, Nicaragua, president; Austin Van Gieson, of Newark, New Jersey, secretary; and Charles M. Crawford, of New York, treasurer. The office of the company is at No. 800 Broad street, Newark. The company begins business by acquiring a plantation of Ceará rubber near La Paz, Nicaragua, owned by Mr. Foster, who has been engaged in business in that republic for a number of years, and his partner, C. H. McLaughlin.

The cultivation of Ceará rubber (*Manihot Glazovii*) was begun in Nicaragua about four years ago. The splendid condition of the plantings and the large yield and excellent quality of the product taken in trial tapplings, give promise of the success of the enterprise. The Ceará rubber tree is a dry land plant and will not prosper in a wet soil. In congenial climatic conditions and soil its early and abundant product and excellent quality make it most profitable to plant. The location in which it is being planted in Nicaragua is a part of the districts of La Paz and Momotombo, where the Momotombo mountain, by driving the clouds to one side, protects this section from the force of the tropical rains, so that it is comparatively dry, receiving just about enough water to grow corn, which is abundant for Ceará rubber. The soil is sandy, with an admixture of a little clay, and very deep and level or slightly rolling. The elevation above the sea is some 300 feet. The section is traversed by the Nicaragua Central railroad. The plantation of the Nicaragua Rubber Co. is the "San Nicolas," on which are the oldest and largest trees in this section. Three year old trees on this plantation measure 26 inches in girth three feet above the soil, and are over 30 feet high.

That Ceará rubber will yield at two years of age has been proved on the "San Nicolas" and neighboring plantations. Twenty-one trees from 14 to 21 months, with an average age of 14 months, were tapped, and together gave 7½ pounds of dry rubber. A tree 15 months old gave 3 ounces of rubber. Many trials have been made, with like results. Still it is not intended to tap until the trees are four years old, in order not to retard the best development. It is expected that four-year-old trees will produce one pound of rubber per tree, and from that time the product will augment rapidly. There are now in the district, outside of native plantings, four American plantations of *Manihot Glazovii*, the "San Nicolas," "La Victoria," "La Americano," and "El Trinifo," on which are planted some 200,000 trees, while as many more will be planted in another year.

### FOR VENEZUELAN DEVELOPMENT.

A PUBLIC company under the style Venezuela India Rubber Trust, Limited, was registered in Guernsey, England, October 1; capital, £650,000 [= \$3,163,225], in £1 shares. Object, to acquire gum and essential oil enterprises, concessions, and properties, and India-rubber, Gutta-percha, and Balata forests, especially in the Orinoco valley, Venezuela; to develop and exploit the same, and to carry on any business incidental or auxiliary thereto. The names of the first directors are not given.



## THE EDITOR'S BOOK TABLE.

SELF-PROPELLED VEHICLES. A PRACTICAL TREATISE ON THE CONSTRUCTION, OPERATION, CARE, AND MANAGEMENT OF ALL FORMS OF AUTOMOBILES. By James E. Homans, A.M. Second Revised Edition. New York: The Automobile Club, 1904. [Cloth. 16 mo. Pp. vii + 600. Price, \$2.]

THE object which the author has had in mind has been the production of a book that would be "serviceable to owners of automobiles and to those desiring to qualify as practical chauffeurs, so far as the essential knowledge may be imparted by a book." He regards the automobile as a thoroughly practical machine, though its use has, in many cases, proved unsatisfactory—the builder often being blamed, when the fault lies with the owner, who has neglected to inform himself properly in regard to the construction of his machine, and how it should be used. Here, in more than two score chapters, are given, in simple and clear English, the principles of construction and operation, including suggestions for use in cases of emergency, the whole being illustrated by a large number of well chosen and well executed engravings.

Two of the chapters are headed "Solid Rubber Tires" and "The Use and Effect of Pneumatic Tires." Comprising 41 pages, with 30 small illustrations, these chapters cover the theory of the utility of the rubber tire, and suggest the fitness of certain types to certain conditions, together with very full instructions in regard to repairs.

Different makes of tires, as well as of automobiles, are referred to, and frequent credit is given to authors and publications quoted. The fact that a second and enlarged edition of this book follows the first edition within two years is evidence of the existence of a practical demand for such a work.

THE AMAZON: HISTORICAL, CHOROGRAPHICAL, AND STATISTICAL OUTLINE, UP TO THE YEAR 1903. By Lopes Gonçalves. First Edition. New York: Hugo J. Hanf, 1904. [Cloth. 8vo. Pp. ix + 117; viii + 112. Price, \$1.50.]

THIS is the English title of a book in two parts, one half of which contains the same matter in Portuguese, under the title "O Amazonas." The author is a distinguished member of the legal profession in Brazil, and a patriotic citizen of the Amazon state, as shown by the dedication of his book to two officials of the state who were influential in defending title to the Acre district as against Bolivia. The book is a handy and useful compendium of the history of Amazonas, and of facts regarding its natural resources and the development of its commerce. Naturally many references are made to India-rubber, which is the basis of the commerce of Manáos, the capital of the state, and of the shipping interests on the Amazon. The compilation of the work was incidental to the service of its author, first as a member of a commission to prepare a collection of Amazonas products for the St. Louis World's Fair, and later as the official representative of the state at the fair.

BRAZIL AT THE LOUISIANA PURCHASE EXPOSITION, ST. LOUIS, 1904. By Ernest Ule. [Paper. Folio. Pp. 20.]

BRAZIL. [EXTRACT FROM THE HISTORY OF THE LOUISIANA PURCHASE EXPOSITION, SAINT LOUIS, 1904.] [Paper. Folio. Pp. 20.]

THE Brazilian government made an appropriation equal to \$600,000 for a proper representation at the St. Louis World's Fair, in consequence of which, not only was there erected a beautiful and extensive national pavilion, but creditable exhibits of Brazilian natural and industrial products appeared in twelve of the fifteen departments of the fair. In the first of the publications of which the titles are given above, it is stated that the purpose is to serve rather as a souvenir of Brazil's participation in the St. Louis fair than as a comprehensive description of the resources of Brazil, though it is expected that the book will prove of value as a starting point for future investigation. In spite of this modest announcement, it is not too much to say that the handsomely illustrated volume before us gives a better view of the manifold resources of the leading South

American republic than has ever before appeared in the English language. The volume concludes with a classified list of all the Brazilian exhibits at St. Louis, from which it appears that specimens of rubber formed a part of no less than 16 exhibits, from the states of Grão Pará, Amazonas, Bahai, Matto Grosso, and São Paulo.—The second publication mentioned is a well drawn up and handsomely illustrated description of the Brazilian Pavilion and its contents, with references to the principal resources of the republic.

ANLEITUNG ZUR GEWICHTS-BERECHNUNG TECHNISCHER GUMMIWAREN. SOWIE ZUR ERMITTLUNG DER SPECIFISCHEN ZAHLEN. Von Fritz Marzoll. Dresden: Steinkopff & Springer, 1904. [Cloth. 16 mo. Pp. 38. Price 1.50 marks.]

THIS is a guide to computing the weights of rubber goods of whatever kind, for the use of factory workers, dealers, or buyers of rubber goods, of particular use in cases where the selling price, considered in relation to weights, in any sense indicates quality. Likewise, the specific gravity of rubber compounds is indicated. The weights of rubber tubes and rings, with the most usual dimensions of thickness, diameter, etc., are given in tabular form, together with like details for threads, valves, buffers, and the like.

JUBILEE OF THE PLANTERS' ASSOCIATION OF CEYLON, 1854-1904. Illustrated Souvenir of the *Times of Ceylon*. Colombo: 1904. [8vo. 48 pages.]

THE association here named has done a work of incalculable value in advancing planting interests in Ceylon, and its leaders, whose lives are briefly sketched in this pamphlet, deserve a prominent place in the history of the island. To-day the association is devoting to the rubber planting interest, described in Mr. Pearson's letters in THE INDIA RUBBER WORLD, the same intelligent attention that, in earlier years, it gave to coffee, tea, and other products, and there is reason to believe that the results will be equally satisfactory.

## ARTICLES IN CURRENT PERIODICALS.

A PROPOS d'un livre sur les plantes a Caoutchouc. By Aug. Chevalier. [Review of E. DeWildeman's "Les Lianes Caoutchoutifères du Congo."] = *Revue des Cultures Coloniales*, Paris. XV-152 (July 5, 1904.)

Le Manicoba de Bahia. By A. Cardozo. = *Journal d'Agriculture Tropicale*, Paris. IV-36 (June 30, 1904). Pp. 173-175.

Onze hedendaagsche kennis van het Caoutchouc en zijn voorkomen in de natuur. By W. R. Tromp de Haas (in *Teusmannia*, Batavia.) = *De Indische Mercur*, Amsterdam. XXVII-26 (June 28, 1904). Pp. 461-462.

Die *Kickxia elastica* (Preuss) und ihre Kultur. By Max Zitzow. [An exhaustive paper on an African rubber species of interest.] = *Der Tropenpflanzer*, Berlin. VIII-5 (May, 1904). Pp. 228-250.

Caoutchouc-cultuur op Sumatra's Oostkust. = *De Indische Mercur*, Amsterdam. XXVI-52 (December 29, 1903). Pp. 883-884.

Ule's Expedition nach den Kautschuk-Gebieten des Amazonenstromes. By Ernest Ule. [Fifth and sixth reports, the latter relating to travels in Peru; followed by summary of results of the whole expedition.] = *Notizblatt des Königlichen Botanischen Gartens und Museums zu Berlin*. IV-33 (January 15, 1904.) Pp. 107-123.

## THE COLORADO RUBBER INTEREST.

THE Riverside Crude and Refined Rubber Co. was incorporated August 11, 1904, under Colorado laws, with \$1,000,000 capital authorized, and with principal offices to be located in Denver. Simon L. Woodbury, George Leonhardy, Daniel D. Long, and others, are named in the incorporation papers. Mr. Leonhardy writes to THE INDIA RUBBER WORLD that the object of the company is "to gather the plant"—referring to the recently much discussed Colorado rubber shrub—"and manufacture the rubber therefrom, which we have experimented with and found beyond doubt that we can do."

## THE PASSING OF THE OLDEST RUBBER IMPORTER.

DIED—At his home in Wellesley, Massachusetts, on Tuesday, October 11, 1904, after a protracted illness, GEORGE A. ALDEN, in his seventy-fifth year.

THE dean of the rubber importing trade in America—much longer engaged in the business than any of his survivors in any country—has finally closed his account with time, after first having placed a good balance on the right side, as a man and a citizen, as well as a merchant. It was no ordinary career with which this sketch has to deal. Its historic aspect alone would render it of interest. When Mr. Alden began the importation of rubber, Charles Goodyear's activity was at its height; he had not yet published his book, and his original vulcanization patent was still valid. Scarcely more than a score of rubber factories existed in this country, and their combined product was less than that of each of several factories now in the field. Mr. Alden, therefore, not only saw the growth of the rubber industry almost from the beginning, but it benefited in countless ways from his counsel and often from his active participation. Had he lived until August next, he would have been engaged in the trade for 50 years.

George Adelbert Alden was born April 7, 1830, at Hope, Maine, being the son of Silas and Sarah (Lindley) Alden. He was descended, in the seventh generation, from John Alden, who was one of the party that sailed in the *Mayflower*, and landed at Plymouth, Massachusetts, in 1620, and who was married the next year to Priscilla Mullens, a fellow passenger. The incidents of their courtship form the theme of Longfellow's "Courtship of Miles Standish." John Alden was a magistrate in the colony for more than 30 years, and outlived all the other signers of the *Mayflower* compact. In the succeeding generations were men of strength and of prominent activity in the history of New England, from whom the subject of this sketch derived the strong traits which made him long one of Boston's most representative business men.

In 1834 the father of George Alden settled in Bangor, Maine, where for many years he was engaged in the drug business, and died in his eighty-seventh year. George, who was the second of ten children, attended the public schools of Bangor, after which he assisted his father in the store until his eighteenth year, when he entered the retail department of William B. Little & Co., druggists, of Boston. In 1851 he went to Philadelphia, remaining two years, after which he returned to his former employers, then reorganized as George B. Little & Co., and remained with them as manager until 1855. In August of that year he engaged in business on his own account, as a broker in drugs and an importer of crude India-rubber. Two years later Isaac P. T. Edmands became a partner, under the

style of Alden & Edmands, and the importation of goat skins was added. In 1874 the firm was dissolved, Mr. Alden retaining the rubber business and Mr. Edmands taking the goat skins branch. Mr. Alden continued in business alone until 1878, when, his eldest son, having attained his majority, was admitted to partnership, under the firm name of George A. Alden & Co., which is still continued. Arthur W. Stedman was admitted as a partner in January, 1898.

Mr. Alden's success as a merchant was assured at the very threshold of his career. It was the result, in part, of the favorable conditions of the special trade in which he was engaged, but still more of the judgment and skill with which it was managed. The business of Mr. Alden's firm at an early date ranked among the largest in the importation of India-rubber and goatskins in the country. Their business in rubber has

always continued very large. In 1884 was organized, for the more extensive importation of this commodity, the New York Commercial Co., Limited, which in 1892 was changed to the New York Commercial Co., with a capital of \$2,500,000, with Mr. Alden, president and his son, Adelbert H. Alden, vice president and general manager. Subsequently branches were established at Pará and Manáos, under the style of Adelbert H. Alden, and in London and Liverpool, as Alden, Symington & Co. In 1880 the firm entered into the shellac business under the name of the New York Shellac Co., which is still continued. The importation of cocoa was added in 1887, and at times the company have been the largest importers of that article to the United States. In 1888 the business of exporting grain, petroleum, lumber, staves, and India-

rubber to various European companies was organized.

At an early period in his connection with the rubber importing trade, Mr. Alden began to hold an interest in manufacturing companies. At the time of his death—not to note some of his earlier connections with the industry—he was president of the Seamless Rubber Co., and a director of the Revere Rubber Co., the Easthampton Rubber Thread Co., and the Glendale Elastic Fabrics Co. He was also connected with various other financial and business enterprises, being a director in the Revere National Bank, the East Boston (Land) Co., and the Colonial Mutual Fire Insurance Co.

It has been said of Mr. Alden by one who had opportunity to watch his career and to discover the traits of character which were essential to its success, that "he has long been the most prominent figure in his line of business in New England, and for many years has been at the head of the largest business of its kind in the United States. It seems unnecessary to expatiate on the qualities required to accomplish the work he



GEORGE ADELBERT ALDEN.



has performed, or to go into details in explaining his success. The best evidence of his business capacity lies in the undorned statement of what he has accomplished. Against strong competition to have maintained and constantly strengthened the position he has so long held in commercial circles; to have successfully met and been equal to the many changing conditions of trade, exhibit better than words of adulation, however merited, the strength of character and forceful nature of the man." The solidity of the business which he established is suggested by the fact that, although the loss incurred from the great fire of 1880 amounted to \$100,000, it caused no embarrassment.

Personally Mr. Alden was of medium height, compactly built, with an alert air, and possessed of an exceptionally pleasant manner. He was an exceedingly sound and capable man of business, and kept in touch with the markets of the world almost to the day of his death. One of his most distinguishing traits was his courage, which did not desert him even when stricken the third time, in July last, and partially paralyzed—but which led him constantly to talk and plan for the time when his recovery should be complete and his daily round at his offices, at bank meetings, and at the "rubber manufacturers' table" at the Trade Club luncheons, be resumed.

Mr. Alden was a member of the Algonquin Club of Boston, the Merchants' Club, Temple Club, Country Club, Boston Art Club, Pine Tree Club, Trade Club, Exchange Club, the Society of Mayflower Descendants of Massachusetts, and the Alden Kindred of America, besides being a life member of St. Andrews Royal Arch Chapter and DeMolay Commandery, Knights Templar.

Mr. Alden married April 21, 1856, Harriet J., daughter of Elijah Hadley, of Charlestown, Massachusetts, who survives him, together with two sons—Adelbert Henry, already mentioned, and George Edwin. For many years Mr. Alden resided in Cambridge, but latterly his summer residence was at Wellesley, where he owned what was formerly the Baker estate, containing 850 acres. He accumulated many relics of historic interest, including the carriage in which Washington rode on his visit to Boston, and the coach presented to Daniel Webster. The winter months the family spent at the Hotel Vendome in Boston.

\* \* \*

FUNERAL services were held at Arlington Street Church, Boston, at 12.30 P. M., on October 14, and were largely attended by the former business associates of Mr. Alden, by representatives of many associations and societies with which he had been identified, and by the public generally. The ushers were employés of Mr. Alden's firm—J. Frank Dunbar, G. Edward Habich, R. L. Chipman, F. L. Moses, Harold W. French, and F. G. Phillips, all of Boston—and Robert B. Baird, of New York, who formerly was in the employ of the firm. Daniel B. Stedman was the head usher. The services were conducted by the minister of this church, the Rev. Paul Revere Frothingham. The music was rendered by Mr. Lewis S. Thompson, organist of the church, and several hymns were sung by a quartet. The following named acted as honorary pall bearers: Congressman J. J. Myers, ex-Congressman L. D. Apsley, president of the New England Rubber Club; Robert D. Evans, Henry C. Morse, George H. Hood, Henry M. Rogers, and Arthur W. Stedman (a partner of Mr. Alden); and ex-Governor Augustus O. Bourn, of Rhode Island. The burial, which was in the Alden family lot at Forrest Hills Cemetery, was private. Among those in attendance, including representatives of other associations mentioned in this paper, was a delegation from the Rubber Druggists' Sundries Association.

#### TRIBUTE OF THE NEW ENGLAND RUBBER CLUB.

At a special meeting of the executive committee of the New England Rubber Club, in Boston, on October 12, to take action on the death of Mr. Alden, the following resolutions were adopted:

WHEREAS, Our Honorary Vice President, counsellor, and friend, George Adelbert Alden, has been stricken by death and removed from our midst, we, the executive committee of the New England Rubber Club, in recognition of our great loss, record the following resolutions:

*Resolved:* That although the deceased was ripe in years and had accomplished more than falls to the lot of most men, his youthful spirit, energy, and sympathetic interest in all that pertains to our industry kept him before us as one always young and active, and we mourn him as one to whom death came most untimely. For fifty years a notable figure in the rubber trade, of old Puritan stock, in every sense a founder of his own fortunes; capable, forceful, true, the soul of courtesy; full of kindness and good fellowship, his name will ever be held by us in loving remembrance. To the business community at large has come a great bereavement in the passing of this honored manufacturer, merchant, banker, and citizen; nor may his place in the community be filled.

*Resolved:* That we extend to his family and to his business associates our deep and sincere sympathy.

*Resolved:* That these resolutions be spread upon the records of the Club, and copies engrossed and presented to his family.

L. D. APSLEY, President,  
HENRY C. PEARSON, Secretary,  
GEORGE P. WHITMORE, Treasurer.  
E. E. WADBROOK, Assistant Secretary.

The executive committee of the Club, as a further mark of respect to its late honorary vice president, attended in a body the funeral services at the Arlington Street Church:

#### ANNOUNCEMENT BY THE FIRM.

It is with deep regret that we announce the death on this day of our respected senior partner, Mr. George A. Alden.

Out of respect to his memory our offices will be closed on Friday, the fourteenth instant, the day of the funeral.

Under the terms of the copartnership Mr. Alden's interest remains in the firm, and the business will be continued by the surviving partners, and with the same responsibility as heretofore. GEO. A. ALDEN & CO.  
Boston, October 11, 1904.

#### OBITUARY NOTES.

CHARLES MORTON HAUTHAWAY, who died at his home in Brockton, Massachusetts, on September 29, was born in Plymouth, in that state, September 17, 1839. After serving in the civil war, he joined his father, the late C. L. Hauthaway, in the manufacture of rubber cements and shoe blackings, in which business he displayed great ability, and aided in making the house the largest in its line. A brother of the deceased, E. M. Hauthaway, was also admitted to the business, which is now carried on in Boston under the style of C. L. Hauthaway & Sons, Incorporated, with the surviving brother as the senior member. About 15 years ago the subject of this sketch retired from business and was succeeded by his son, Frank M. Hauthaway, who is now treasurer of the house. Mr. Hauthaway was a member of the Grand Army of the Republic and the Commercial Club of Brockton. Besides the son above mentioned, he is survived by a widow.

CHARLES Y. YEATON, who died in New York on September 29, in his sixty-ninth year, was a native of Portsmouth, New Hampshire, and descended from an old New England family. He is mentioned as having come to New York in the early fifties, when he was employed by Horace H. Day, the rubber manufacturer. Later he patented several inventions—including, it is said, the first type-writer machine ever offered for sale—and became wealthy, but died poor.

## THE INDIA-RUBBER TRADE IN GREAT BRITAIN.

By Our Regular Correspondent.

NATURALLY, with the lapsing of the Welch patent and the forthcoming lapse of the Bartlett patent, the present is a busy and somewhat exciting time in the tire world. It is too soon yet to gage the probable fall in prices, though, to hear some motorists talk, one would think that raw rubber could be bought for a mere song. "It is our turn now; we have paid through the nose long enough," said a motorist to me the other day, but I am afraid that the lapse of the patents will not, after all, benefit them to the extent they seem to anticipate. I hear Moseley's new motor tire well spoken of; this is quite distinct from the red Seddon tire, made solely by this firm. The arrangement between Michelin et Cie. and the North British Rubber Co., Limited, has now naturally terminated, and, as has been already announced, Michelin's are about to manufacture in Great Britain—that is if the proposed new company comes to maturity. The North British are now going ahead with their "Clincher" tire with wired edges, so there is plenty of keen competition to be expected. It appears that the continuous tire litigation which has characterized the progress of the Dunlop company, is not yet at an end, as actions which were entered before the long vacation will still be heard. Though the rubber in motor tires may be considered to have attained as near perfection as can reasonably be expected, there seems to be room yet for improvement in the canvas; I refer especially to making it rot-proof. Of course the Palmer cord tire is an effort in this direction, but I am informed that in the case of a puncture with this tire the car must be stopped at once, otherwise it (the tire) will be altogether ruined. With such tires as the Continental, the journey can be finished after the occurrence of a puncture without the damage becoming more than local. In an article in the *Field* on the tire position, it is stated that most bursts of covers arise through the friction among the threads of the canvas insertion wearing them away, or through wet penetrating a cut and rotting the lining. Of course, even if the textile material is made quite rot-proof, this is no preventive of the bad effects of friction, and theoretically one would expect the principle involved in the Palmer cord tire to prove satisfactory in obviating both defects. It should not be long before the matter is placed beyond all doubt.

THIS law, which comes into operation at the New Year, promises to do away with some of the incongruities which have too long been associated with our patent laws. A search as regards novelty is to be made, and though the patent will not be denied if there is any doubt in the matter, yet any one taking one out that appears to have been anticipated, will do so with his eyes open. The idea is to get as near as possible to what has so long obtained in Germany and America. At the present time, if a man has a patent to dispose of he is asked at once if he has the German and American, as being the only ones thought of any value as far as real novelty is concerned. It will be interesting to watch the effect of the new law upon the rubber substitute or rubber devulcanizer inventor. There really does not seem to be any material, organic or inorganic, which has not been appropriated by some one for a rubber substitute. It is noticeable that the bulk of the specifications relating thereto end with the following expression or one closely identical, "the

substitute may be used as a proofing material or for the purpose of insulation." It would be interesting to know in how many cases hypothesis has merged into fact. Even supposing there were nothing palpably suspicious about the new body as revealed by perusal of the specification, there is always a great difficulty to be surmounted in getting the rubber manufacturer to take it up. "Will you guarantee me for any loss I may incur in using your substitute?" he asks the inventor, and the latter, despite his expressed confidence in the material, usually answers with a prompt negative, negotiations thus coming to a full stop. One can quite understand the attitude of the rubber manufacturer, especially as among the men who are attracted to the patent substitute business one so rarely finds any one with even a rudimentary knowledge of the rubber manufacture. With regard to the devulcanization of rubber, only the other day I saw that a patent had been granted for the use of caustic soda; it really does seem quite absurd the way the alkalies are continually being trotted out as if there was any novelty in their application to this purpose.

AT the recent conference of the Institute of British Carriage Manufacturers the president, Mr. W. H. Hamshaw, spoke in somewhat gloomy tones of the inroads made by American carriages on our Colonial business. As far as England was concerned it was in wheels more particularly that America had ousted the home manufacturer. I am not particularly interested myself in the Institute of Carriage Manufacturers, but the wheel question has more than once attracted my attention in connection with the cab tire trade. It is customary for works controlling the sale of special tires to sell the wheel as a whole, and I find that the bulk of the wheels thus made come to England from America in parts ready to be put together. There is no joining to be done; the aid of the blacksmith, or perhaps I ought to say the wheelwright, alone is required. I suppose that two prominent reasons for American supremacy in this manufacture are cheap timber and the use of labor saving machinery whereby large quantities of pieces of standard pattern are rapidly turned out.

IN an editorial under this heading the *India-Rubber Journal* makes some remarks which are very much to the point generally, and more particularly with regard to the individual who has a secret process for extracting rubber from certain herbage growing in the East Indies. Like the electric sugar swindle of a few years ago, this was a secret process, and the rubber could only be obtained by the "inventor" when interested persons were not looking. It is more than three years since I investigated this matter as far as I was allowed to go, and I had no hesitation in saying that the samples of rubber shown had no connection whatever with the vegetation or the process. The inventors answer to such condemnatory reports is of a personal nature and he assures his prospective patrons who know nothing of rubber that the difficulties in the way of rubber analysis preclude the independent investigator from giving a correct report. I hardly thought that anything more would be heard of the process and have been surprised to read in the journal quoted above that two other firms have recently parted with sums of money in connection with it. I trust that they are city company promotors and not rubber manufacturers; with regard

THE  
TIRE  
TRADE.THE  
CARRIAGE  
MANUFACTURE.ARTIFICIAL  
RUBBER.THE NEW  
PATENT LAW.



to the former class there is too much eagerness to get hold of a process so as to resell it to the public and this without too great anxiety to thoroughly probe its merits. When credulity in this class meets with a rebuff there is no particular call for sympathy. It is hardly conceivable that any rubber manufacturer can have parted with the sums of money mentioned in the *Journal* but whatever the status of those who have rendered financial assistance it is certainly quite time that the game was stopped and the publicity given to the matter at this juncture is fully warranted.

QUITE suddenly the gloom which has now for so lengthy a period pervaded Lancashire has been dispelled, and there is little doubt that we are about to witness a great revival in the trade. The mills which have for so long been on short time will very shortly revert to full time, with the consequence of inducing a busier state of affairs among the various industries which are closely dependent on the fortunes of the cotton trade. Already the shares of many textile concerns have come into demand at the low prices at which they have stood for so long, and substantial rises in market value have occurred in the course of a few days. No doubt this sort of speculation will be overdone and a set-back will occur, but this has little to do with genuine business, which, to judge from informants of reliability, is in if not for a brilliant at any rate for a good time. This, of course, means greater activity for the mill furnisher, among whose goods those of rubber take a prominent position, and that the outlook is a much more cheerful one than I have been able to prognosticate for a considerable time back.

EXACTLY how far Balata enters into the composition of Gutta-percha goods is a matter on which those who are in the best position to give information maintain a discreet silence. It may be only a coincidence that the raw Balata and Gutta trades exhibit a depression at the same time. No doubt the dullness in the ocean cable business has much more to do with the decreased demand for Gutta than has the rubber golf ball, though the influence of the latter on the situation is by no means negligible. The new cable from Denmark to Iceland, though of great importance to the Danish island, is not of sufficient length to give much of a fillip to a depressed industry.

A PACKING which has come into increased favor of late is "Klingerit," sold by Richard Klinger & Co., 66, Fenchurch street, London, E. C. It is a leathery looking compound which I understand has no rubber in it, though I cannot speak from personal knowledge.

THE INVENTOR is an Austrian, known more particularly in connection with an improved water gage for steam boilers, and it was in connection with the packing required for this that the experiments resulting in "Klingerit" were made. As it does not decay in use, it can be used several times, and this appears to carry weight with engineers, though I should think that from the manufacturers' point of view an everlasting article is not altogether desirable. Another packing, which is stated by engineers to give much greater satisfaction than vulcanized rubber for high pressure steam joints, is "Woodite." This material was brought out by Captain Wood over 20 years ago, and was supposed to be composed in part of whalebone. Whether this was so or not it certainly contained a good deal of India-rubber and must be considered as a rubber packing. I presume that the patent, if there ever was one, must have lapsed by this time, and that the present manufacturers depend on the trade mark. There are competitors, it may be mentioned, who offer material the same as "Woodite," but do not invoice it under this name. With regard to "Dermatine" one hears its praise mostly sung

by engineers engaged in hydraulic work, where its use has done away with the annoyances caused by the defection of leather fittings. From what I hear, "Dermatine" has the field pretty much to itself in this line, and no doubt in others with which I am not familiar, but with regard to steam packings it has competition to meet.

THIS firm of rubber machinery engineers have recently made additions to their works at Castleton, near Manchester, and have also opened a branch office at 505 and 507, Corn Exchange buildings, Manchester, under the management of Mr. G. H. Park.

IN a recent British Foreign office publication attention is drawn to the great increase in the Italian imports of raw India-rubber and Gutta-percha. As I have not heard of the founding of any new factories it is a safe assumption that the business of Pirelli & Co., of Milan, is still showing expansion. The report mentions that there are still a number of gutta and rubber articles not yet produced in Italy, and I presume that the import tax on such articles is kept a light one. Some years ago, before tires were made in the country, the British manufacturers did a good trade, but a heavy import tax, subsequently levied, practically put a stop to the business. Elastic thread is not yet being made in Italy, a positive statement to the contrary being due to a misapprehension. A rubber house in Milan does a large trade in the article, but it is all of foreign origin. Though not exactly coming under the above headline, I may call attention to the difficulty in finding from commercial directories what are really rubber factories and what are merely houses employing rubber in some form or other in their manufactures. For instance I don't think that a factory engaged in weaving rubber thread with textiles should be entered in a list of rubber works. But, after all, I suppose, the compilers of trade handbooks are largely in the hands of their subscribers, and is at the doors of the latter that any complaints as to ambiguity of description should be laid.

#### BRAZILIAN RUBBER INTERESTS.

THE urgent need of some methodical supervision of the channel of the river Acre, in order to render its navigation possible throughout the year, with a view to benefiting the rubber trade in that region, was pointed out by a contributor to THE INDIA RUBBER WORLD of October 1 (page 18). In this connection a recent report from Brazil is of interest, to the effect that two engineers, Srs. Raymundo Pereira da Silva and Gentil Norberto, had presented a proposal for removing the obstruction of the river Purus between the point known as Cachoeira and the mouth of the river Acre, a distance of 600 kilometers, so as to allow free navigation all the year round, also the different rapids on the Acre itself as far as Cachoeira do Riozinho. In return, they ask for a right to levy toll on all rubber passing the Cachoeira do Purus at the rate of 85 reis per kilo, and 20 reis on all other descending goods and 45 on ascending; the concession to last for 45 years. With exchange at 12 pence per milreis, the rate on rubber mentioned would equal 85 shillings, or \$20.68¼ per metric ton.

\* \* \*

By a law of June 12, the congress of the state of Maranhão, Brazil, has exempted from export duty corn, manioc flour, and India-rubber of all grades, whenever these articles are intended for foreign consumption. The rubber trade has become of considerable importance since the discovery of a large number of productive rubber trees in the forests of the interior, in the direction of Imperatriz, Grajahu, Barrada Corda, and Riachao.

## THE INDIA-RUBBER INDUSTRY IN SWEDEN AND NORWAY.

*By Our British Correspondent.*

THE India-rubber manufacture in Sweden and Norway is quite a modern one. Although the size of the factories will not bear comparison with those of Great Britain, France, or Germany, yet the output of rubber goods has already attained considerable proportions and, looked at from the point of view of the somewhat scanty population of the countries, the progress already attained must be considered as very satisfactory. Of course this feeling of satisfaction may not be universal; it is more than probable that other European rubber manufacturers who have found their erstwhile exports to Scandinavia show a marked decline may only see cause for grumbling in the altered condition of affairs. Be this as it may, however, the strides that have been made are matters of fact, and as it is the object of this article to bear testimony to the existing state of affairs, there is no need to occupy space by speculations as to how others are affected. To a greater extent, perhaps, than is found in other countries, the Scandinavian works are managed by those whose experience has been gained abroad. This is only natural in the case of a country going into a new line of business, and it undoubtedly has advantages in that the directorate gets into touch with up-to-date practice elsewhere. From the point of view of the journalist thirsty for information this cosmopolitanism is of course a great advantage, and those who have not had the time or the mental energy to master the Scandinavian tongues can rely on being able to converse in English, French, or German, and so get out of an *impasse*. Of course, facility with the better known tongues may not help the visitor to the country in his search for the works. I had much vexation of spirit before finally arriving at a certain *galoger-fabrik*. After having been conducted by kindly disposed persons to various boot shops in the town in which I understood the factory was located, I began to despair of getting my mission fulfilled. After a time, however, I discovered a cabman who knew the place, which proved to be more than five miles away in the country.

But to get to the more practical side of my communication without further delay, a commencement will be made with Norway, though, as will be seen by what follows, the sister country is by far the more important of the two as regards the output of rubber goods. The principal—one might really say the only—rubber factory in Norway is Aktieselskabet den Norske Galoge- og Gummivare-Fabrik, situated at Mjøndalen-Drammen, some 30 miles west of Christiania. By way of explanation to the uninitiated I may say that *Selskab*, in Norwegian, as also *Bolag*, in Swedish, corresponds to our "Limited" company, *et* being the definite article, which, in the Scandinavian tongues, is an affix. This works was founded in 1897, the main object, as the name indicates, being the production of rubber boots and shoes. The capital is 400,000 *kroner*.\* The *disponente*, or general manager, is Mr. Aug. Fladmark, while the works management is in the hands of Mr. G. M. Hassel, who has had considerable experience of the trade, both in America and England. In addition to galoshes, which are the mainstay of the works, considerable quantities of soles for lawn tennis shoes are made. This pastime has now a considerable vogue in Scandinavia, though the name is not particularly appropriate, as the courts are nearly always of the asphalt or

gravel variety. This, of course, is all on the side of the trade, as shoes wear out much sooner on such courts than on grass lawns. There is the less need to go into details regarding this firm, as a special article referring to the works has been already published in THE INDIA RUBBER WORLD [September 1, 1899—page 355.]

The only other rubber factory in Norway is the Stavanger Gummivare-Fabrik. This is a small concern, making fruit jar rings, engine packings, and sundry mechanical goods. The Aktieselskabet den Norske Remfabrik, of Christiania, manufactures Balata and leather belting, with which reference we may now pass on to Sweden.

Here we find five factories, situated respectively at Helsingborg, Malmö, Trelleborg, Viskafor, and Gislaved; some particulars concerning each of these, as far as they have been furnished by the respective directorates, will now be given.

The Helsingborg Gummi-Fabrik Aktiebolaget was commenced as a private concern in 1890, but in the following year was made into a limited company, including the originators, Konsul P. Olsson and J. Dunker. The capital was raised to 151,000 *kroner*, and not long afterwards to 1,500,000 *kroner*, the works in late years having been considerably extended. They are situated in the outskirts of the town, and command a good view of the Danish coast, the sound being at this point only  $2\frac{1}{2}$  miles wide. The general manager is Mr. Henry Dunker, a name which might lead one to suppose him of English nationality, whereas he is a genuine Swede. Six hundred work people are employed, 5000 pairs of galoshes being turned out per day, having a yearly value of 250,000 *kroner*. The engines have an effective horse-power of 450. Though the galosh business is the principal one, the company also make mechanicals, such as railway vacuum hose; also, cycle tires, tennis balls, and painted playing balls. Statistics indicate that of a total export of galoshes in 1902 from Sweden of 289,000 kilograms, 166,000 kilograms came from the Helsingborg works. The Swedish exports go to Norway, Denmark, Germany, France, Switzerland, Austria-Hungary, and the Balkan states. The imports of raw rubber into Sweden in 1902 amounted to 300,000 kilograms, of which 193,000 kilos went to the Helsingborg factory, a fact which speaks for itself with regard to the status of the firm in the Swedish rubber world.

We turn now to Aktiebolaget "Velox" Gummi-Fabrik, at Trelleborg, a small town in the extreme southeast of Sweden. This company was formed in 1897 with a share capital of 300,000 *kroner*. The managing director is Johan Kock and the manager Albert Holmquist. The number of hands employed is about 100, though in the busy part of the tire season this number has to be considerably augmented. The tire trade has declined somewhat of late years from its former importance, and the company has paid increasing attention to mechanical goods of all kinds. A specialty is the covering of the large rollers used in paper mills, and it is understood that they have been successful in securing the bulk of this trade, which is an increasing one in Scandinavia, many of the mills which formerly exported all their wood pulp now making it or at least some of it into paper on the spot. At a large paper mill which I visited in Norway the machine was supplied by Messrs. Bertram's, Limited, of Edinburgh, but the rubber rollers were not of British origin, I understand. In proportion to its population Sweden

\* One *kroner* = 26.5 cents.



has, I believe, a greater mileage of railway than any other European country, and the consequent demand for certain rubber goods is largely met by the Trelleborg company. I did a good deal of traveling by rail north of Stockholm, and only saw two names stamped on the vacuum brake hose—those of Trelleborg and Helsingborg, the former name occurring much more frequently than the latter. There may, of course, have been hose in use derived from other sources. I can only testify to the fact that I did not come across any. The nervous traveler, by the way, might wish that continuous brakes were compulsory on passenger trains. They are always there, certainly, but when, as is often the case even with the so-called express train, trucks of wood or other merchandise are added to the train, the continuous brake system lapses and the passenger coaches are boarded by brake boys who work the hand brake on the inclines. This is somewhat of a divergence from my strict topic of the Trelleborg works, though it is not altogether without bearing upon its railway hose department. From 1900 to 1903 the company had an agreement with the Dunlop Pneumatic Tyre Co., Limited (Continental), to manufacture all original Dunlop tires sold in Scandinavia. It may be mentioned in conclusion that the works manager and foremen are Englishmen, and that the company has offices in Stockholm and Gothenburg.

I now pass on to Svenska Gummi-Fabriks Aktiebolaget, of Gislaved, a small town in the region north of Gothenburg. There is a strong American flavor about this factory, as it was built in 1893 by the present manager, Mr. William Gislöw, formerly employed by the Boston Rubber Shoe Co. and the Good-year's India Rubber Glove Manufacturing Co. It may be mentioned, by the way, that Mr. Gislöw also built the Helsingborg factory, in 1891. Until the Trelleborg firm entered into competition in 1899 the firm under notice was the only one in Sweden making mechanical rubber goods, which are now, as formerly, the main product. The first premises proving too small, a new mill was built in 1898, so as to enable the rubber shoe branch to be taken up. In June, 1900, their new premises were entirely destroyed by fire, but were rebuilt in the following year, and work is again in full swing. Rubber shoes, cycle tires, and balls are made, in addition to mechanical goods for railway and admiralty and general factory purposes. Much of the rubber machinery has been made in America, the Farrel Foundry and Machine Co., being, I understand the principal supplier. As a change from the other works and as being more in accordance with the traditions and practice of Scandinavia this factory is run by water power; three turbines are in use developing 450 HP. The use of coal is thus reduced to the minimum required for raising steam for vulcan pans, etc. The floor space of the factory I may mention amounts to about 45,000 square feet.

The last two works to which I have to refer can only be treated summarily, as I am not in possession of any detailed information. The first of these is Skandinaviska Gummi Aktiebolaget Svanholen, of Viskafors, a small town lying some distance northeast of Gothenburg. The factory was founded in 1890 and has a capital of 370,000 *kroner*. The general manager is Hjalmar Hallin, and the main article produced is the galosh.

The other works, which is also the newest in Sweden, is known as Svensk-Engelska Gummi-Fabrik Aktiebolaget. It was formed in 1898 with a combined Swedish and English capital of 400,000 *kroner*. The factory is situated in the outskirts of the large town Malmö, on the south coast, on the through route from Copenhagen to Stockholm.

From what I gathered in conversation it would rather seem that the recent multiplication of rubber shoe factories, and in-

deed mechanical rubber factories, has produced a competition in the home markets which is too keen for profitable business. It was, of course, easy enough by means of duties to ward off the foreign attack, but now those who were first established find their business cut into by new comers. It is suggested that all the elements for a satisfactory combination in the trade exist, the principal element, of course, being the limited number of factories. The Norwegian and Swede, it appears, can now, on account of the competition, purchase a better class article—I am referring more particularly to galoshes—for a certain sum of money than is the case in any other country, and the manufacturers, therefore, who do not lay claim to altruistic motives, are inclined to grumble at the state of affairs.

Without having the requisite degree of knowledge to enable me to comment usefully on the plaint which I have voiced, I can yet understand that in the case of sparsely populated countries such as Sweden and Norway, the competition arising from five rubber shoe factories may easily become somewhat disastrous from a dividend-paying standpoint. Evidently the business done by the firms first established must have been satisfactory, otherwise new comers would not have been attracted to the scene. It has been mentioned elsewhere that the Germans intend to raise their tariff against the Scandinavian rubber shoe factories, so things do not altogether look too bright for the future. One sees advertisements of Russian galoshes at stations up and down the country, but the only public advertisement of the sort referring to Swedish firms which caught my eye was—

“Malmö galoscher starka frau latta elegante billiga”

—which I take to mean strength, combined with lightness, at moderate prices. So much for the Scandinavian rubber trade, the study of which in the course of a holiday tour could, of course, only be superficial. The pages of this Journal, which, though American in origin, is thoroughly cosmopolitan in its aims and trade interests, will be open to Scandinavians who may wish to amplify or criticise the remarks of the present writer.

\* \* \*

EDITORIAL NOTE.—The following statistical details, compiled by THE INDIA RUBBER WORLD from various official sources, may prove of interest as supplementing the foregoing correspondence:

AMERICAN FACTORIES OF RUBBER GOODS TO SWEDEN AND NORWAY.

	1900.	1901.	1902.	1903.
Belting, packing, and hose \$	3,456	\$ 7,889	\$ 4,134	\$ 5,542
Boot and shoes.....	1,132	137	7,931	5,183
All other.....	9,866	25,266	7,729	13,908
Total.....	\$14,394	\$33,792	\$19,794	\$24,633

BRITISH RUBBER GOODS EXPORTS TO SWEDEN AND NORWAY.

	1901.	1902.	1903.
a Boots and shoes.....	£11,105	£ 9,711	£ 9,945
b Other sorts.....	32,441	32,692	22,988
Total.....	£43,606	£42,403	£32,933

a To Norway alone.

b Not including Waterproofed Apparel.

GERMAN RUBBER GOODS EXPORTS TO SWEDEN.

[Weights in Kilograms.]

	1901.	1902.	1903.
Rubber threads and sheets.....	17,300	35,000	31,100
Elastic tissues.....	145,200	135,300	146,500
Hard rubber goods.....	41,500	43,000	50,600
Fabrics and rubber—including tires.	16,900	17,500	24,200
Hose (mechanical).....	14,100	15,700	28,500

GERMAN IMPORTS FROM SWEDEN.

	1901.	1902.	1903.
Boots and shoes..... kilos	51,000	44,700	28,400

Corresponding details for Norway are not available from Germany.

## INSULATING MATERIALS IN HIGH TENSION CABLES.\*

**T**WO insulating materials are now principally competing in the field of high tension cables—vulcanized rubber and paper impregnated with rosin and oil mixtures.

Paper insulation has made great progress in the last few years. The utility of using good manila paper, laid on in thin and regular layers, without wrinkles and crumpling, has been recognized, and also the utility of having it properly desiccated, at a moderate temperature, in a vacuum, and impregnated with a compound of rosin, or wax, or asphalt, with mineral, or castor, or linseed, or some other oil, that does not become brittle or pulverize with age. But rubber also has made progress; and if some feared formerly that it would decay with age, it is now certain that first class rubber cables, well vulcanized, and removed from the influence of brush discharges in the air, or not alternately dry and wet, will last indefinitely.

Rubber has a dielectric strength much higher than impregnated paper. Testing good rubber cables in such lengths as to include the inevitable irregularities of manufacture, with tensions progressively increasing and subjected to dielectric strain at least one hour, we can easily obtain for the rubber a dielectric strength of 12 to 15 kilovolts per millimeter. Paper in the same conditions would only stand 8 to 10 kilovolts per millimeter. These numbers represent as good an average as we can reach in normal manufacturing; it is not rare to find 20 to 30 per cent. more, or even higher percentages, but we cannot reckon upon these. The higher dielectric strength of rubber brings us to the conclusion that the use of rubber for very high tension will extend more and more.

\* \* \*

A CAUSE of inferiority of the rubber is the lesser homogeneity of its products. It is not uncommon to find that two cables, manufactured in the same manner, with the same quality of rubber, afford a very different resistance to perforation—a difference, say, of 30 to 40 or 50 per cent. Paper cables are more homogeneous. The figures relative to dielectric strength given above are the result of a great number of tests made by the author on cables of various makers. They do not take account of some exceptionally high strengths; I found some pieces of rubber cable to withstand 20 to 25 kilovolts per millimeter. The elasticity of rubber gives it a great superiority over paper. A paper cable with large thickness of paper can not be easily bent, especially in cold weather, owing to cracking; on the other hand, the manufacture of concentric, or stranded, multiple core cables is simpler in the case of paper cables, for the insulating material can be uniformly distributed in the interspaces among the conductors, which remain buried in the insulator, which is not possible with rubber.

The great success of paper cables is a consequence of their lower price. But very high tensions require such a greater thickness of paper, that the cost of the paper added to the extra price for the larger quantity of lead, steel, tape, etc., permits the rubber to win in the competition.

The problem of manufacturing high tension cables would be simpler if the gradient of the potential within the body of the

insulator was constant. Suppose a 38 square millimeter cable insulated to 14.5 millimeters outer diameter, and working at 25,000 volts. The layer near the copper supports a strain of 5000 volts per millimeter, while near the lead the stress is only 1200 volts per millimeter. Should the stress be constant throughout, each layer of 1 millimeter would support a strain of 2270 volts, and the cable would be much safer. We could then also diminish the thickness of the insulation to, say, 5 millimeters, letting every layer work at 5000 volts.

\* \* \*

WITHOUT claiming to get an absolutely constant gradient, we can, therefore, try to have the potential better distributed along the radius of the insulation, and at the same time use in the proper place materials having greater dielectric strength, by making the insulating layers of different materials specially chosen. This method I studied and applied to the manufacture of high tension cables, as early as 1898. Such cables, consisting of conductors first insulated with several layers of rubber, on which were wound layers of paper or jute, were patented by Messrs. Pirelli & Co. [Milan, Italy], March, 1900. A cable of this kind was working at 25,000 volts, during the Paris exhibition of 1900.

The specific inductive capacity of paper cables varies from 3 to 4, according to the type of paper and mixture adopted. The inductive capacity of paper is about 2; that of rosin 2 to 3, according to its origin; and mixtures of rosin, oil, paraffin, ozokerite, and other materials, have a capacity of 3 to 4, or even more. For example, lubricating oil 55 parts, rosin 560, paraffin 224, ozokerite 160, has a standard inductive capacity of 3.6; oxydized linseed oil 90, rosin 370, Arkangel pitch 70, have 4.4; Arkangel pitch itself has 5.9; a mixture with Gallipot, instead of rosin—for example, Gallipot 600, Arkangel pitch 110 and linseed oil 130—has 4.8; a mixture of lubricating oil 9, rosin 52, black ozokerite 23, white ozokerite 16, has only 3.55.

It appears from these figures that it is possible to have a large range of inductive capacity with paper cables. But as they are impregnated in mass, the entire mass has the same standard inductive capacity unless we change the type of paper, by using, for example, paper loaded with some materials, as suggested very ingeniously by Mr. O'Gorman.

\* \* \*

ON the contrary, it is easy to use different rubbers having varied standard inductive capacity, for rubber is put on in successive layers which can be quite different one from another, and which have no tendency to mingle together, either during or after manufacture. The cables I alluded to are manufactured with layers of various qualities of rubber in the inner part of the insulation; but as soon as the gradient of potential becomes so diminished as to allow the use of paper, the insulation is continued with paper, and after the paper with jute, if the gradient is sufficiently low to allow the use of jute. The rubber insulation is generally first vulcanized and the conductor tested in water, as usual, before adding the outer layers of paper and jute.

Pure vulcanized rubber has an inductive capacity something like three as an average; but it is very easy to "load" the rubber with large quantities of extraneous materials, which, without sensibly lessening its specific dielectric strength, augment the capacity very much. A rubber with 58 per cent. Pará, 2 per cent. sulphur, 26 per cent. talc and 14 per cent.

\*The matter presented herewith consists of a series of paragraphs selected from an exhaustive paper presented at the International Electrical Congress, at St. Louis, by Signor Emmanuel Jona, chief electrician of the establishment of Pielli & Co. (Milan), and a delegate to the congress from the Associazione Elettrotecnica Italiana. There is not space in these pages for all the data introduced by the author as the basis for his conclusions; but without these the paper, though incomplete, will not fail to be of interest, in connection with the relative merit of rubber and paper as insulating materials.—THE EDITOR.



oxide of zinc, has a dielectric strength comparable to that of pure vulcanized Pará (15 to 20 kilovolts per millimeter); and a specific inductive capacity of 4 to 4.2. A rubber with 64 per cent. Pará, 8 per cent. sulphur, 16 per cent. talc, 8 per cent. minium, 4 per cent. oxide of zinc has about the same dielectric strength as above mentioned, while its specific capacity reaches five. A rubber largely loaded with sulphur and talc, for example, Pará 100, talc 40, and sulphur 40, has a capacity as high as 6.10, with a dielectric strength of the same order of magnitude as before. A mixture of Pará 40, carbonate of lime 45, sulphur 5, has a standard inductive capacity of 4.6. Very large variations of capacity, accompanied by high dielectric strength, are obtained by loading rubber with more or less sulphur and golden sulphurate of antimony still remaining first-class rubber. Much larger capacities, 10 to 12, are to be obtained, of course, by using very large percentages of India-rubber substitutes, such as gypsum, lime, baryta, etc.; but we then arrive at inferior classes of rubber, which have not a dielectric strength to be compared with the above-mentioned combinations.

\* \* \*

IT is very easy to manufacture rubber cables with layers disposed in the order of decreased specific capacity, from the center to the circumference. These cables will afford a more uniform gradient to an alternating current, and hence more safety, with equal thickness. By using paper on the rubber, as above explained, we concentrate the more costly rubber insulation in the inmost part of the cable, where its higher specific strength is actually utilized.

A sample of a single core cable made by this method for 50-kilovolt effective tension, between the copper and the outer sheathing, has the following specifications: Conductor, 19-wire strand, each wire 3.3 millimeters diameter; section of copper 162 square millimeters. The strand is put in a lead tube having 18 millimeters outer diameter. It is insulated with a first layer of rubber, 2.5 millimeters thick, having a specific inductive capacity of 6.1; then with a second and a third layer of rubber of respectively 2.3 and 4.5 millimeters thick and 4.7 to 4.2 standard inductive capacity. On the rubber there is a layer of impregnated paper 5.2 millimeters thick, having a standard inductive capacity of 4. The cable is then lead-covered. The total thickness of insulation is 14.5 millimeters.

At 50,000 volts, the maximum strain in the first layer of rubber is 4400 volts per millimeter; in the second layer it is 4450 volts, in the third 4150 and in the paper 3250 volts per millimeter. With a homogeneous dielectric, the maximum strain would be 5800 volts. This cable was tested for one hour at each of the following voltages: 35,000 effective volts, 40,000, 45,000, 50,000, 55,000, 60,000, 65,000, 70,000, 75,000, 80,000, 85,000, 90,000, 95,000, and four hours at 100,000 volts without perforation. After the 80,000 volts test, its temperature was a few degrees higher than that of the room; and after four hours at 100,000 volts, twenty degrees centigrade higher.

\* \* \*

GUTTA-PERCHA possesses also very great dielectric strength, comparable to that of good rubber, 15 to 20 kilovolts per millimeter. It is not used for insulating cables for lighting or power purposes, because of its very high price, and also its especially low melting point. Such cables can easily reach a temperature which softens Gutta-percha. A possible application of Gutta-percha is for cables crossing lakes, rivers, and, generally speaking, for laying in cold water. It is then advisable to make a first layer of rubber insulation, on which Gutta-percha is laid so that the latter, being in contact with external cold water, can not heat very much. Many manufacturers do

not trust the impermeability of rubber cables, and this external coat of Gutta-percha, absolutely waterproof, adds its own dielectric strength to that of rubber and obviates the inconvenience of having a heavy lead pipe, as employed by the manufacturers to which I have alluded. It is often advisable in such cables to avoid splices, and for the sake of facility of transport and laying, they can be single cored, rather than three cored. I may add that single core cables for very high tensions, requiring generally a low current strength, can often be armored with steel wires; the steel wires can be separately wrapped with tarred manila, in order to lessen the section of the metal and increase the magnetic and electric resistance of the cross circuit. For example, a 2.5 millimeter steel wire wrapped to 5 or 6 millimeters with manila, may be used without any great inconvenience from hysteresis or self-induction; the drop of pressure by self-induction can have in such cables no more importance than the drop by ohmic resistance.

\* \* \*

I WOULD like to add something on the properties of various insulating materials. These materials are influenced by Röntgen rays, which lessen their specific insulation and perhaps also their dielectric strength. But cables are not made to be submitted to such rays, although they often experience brush discharges and some other emanations, which may have similar influences. I should like to add that temperature lessens the resistance of the insulation very quickly, as expressed in megohms. A paper cable at 35° Centigrade shows but one-thirtieth of the megohms it has at 15° Centigrade. But temperature has very little influence upon strength to resist breakdown. Palm oil melted at 50° Centigrade gives a strength corresponding to that of the best oils for transformers at ordinary temperature. I have drawn experimental curves of dielectric strength of melted paraffin at 55° Centigrade and at 85° Centigrade from 10 up to 160 kilovolts; they are very similar. This allows us to conclude that in this respect cables cannot differ very much. I have tested two reels of paper cables, each cut in five pieces, immersed in baths at zero, 15°, 35°, 70°, and 100° Centigrade. The dielectric strength did not lessen by raising temperature, perhaps at zero it was less than at 70°. I noted in some oils something similar, but dielectric strength is too complex a phenomenon to be discussed on small experimental differences. Of course, that cannot justify us in working at high tensions with cables too highly heated, for it is probable that heat would facilitate a chemical decay of the dielectric; but a momentary elevation of temperature is not so much to be feared as one would think at first sight.

#### THE WEARING OF RUBBER COLLARS.

THE New York *Press* says that Mr. Duke, "worth millions, all of which he made out of tobacco, is not the only person in the world who wears rubber collars. They are becoming popular with schoolboys on account of their economy. Seven linen collars a week cost to launder fourteen cents. A rubber collar, price thirty-five cents, can be cleaned without trouble every morning, or a dozen times a day, and will last three months. As an experiment, I tried one of these collars on a fishing trip and it was not a success. Being impervious, it caused the neck to sweat too freely and kept the neckband of the shirt wringing wet. Others have had the same experience. For ten years the manufacturers have moved heaven and earth in vain to induce the trade to handle these rubber collars. Their business is confined to two small shops in this city. Perhaps if they would judiciously advertise, something might be accomplished. They might build up a mail order business."

## VULCANIZATION OF RUBBER BY ELECTRICITY.

ONE of the most interesting recent developments in the line of rubber manufacture is the Riddle process for the vulcanization of rubber by electric heat, generated either in press, vulcanizer, mold, support, or former. The inventor and patentee of the processes and machinery is Mr. Howard S. Riddle, for six years mechanical

That this process has an almost infinite number of applications in the manipulation of rubber is at once apparent. Those cited by the inventor relate chiefly to the closing of the mold and the curing of the rubber in molds for tires of the single tube and clincher variety, in curing hose by sending a current through the mandrel on which it is made, in closing the platens of a press for regular mold work, in heating the platens, and in closing the door of a vulcanizer and holding it tightly while the

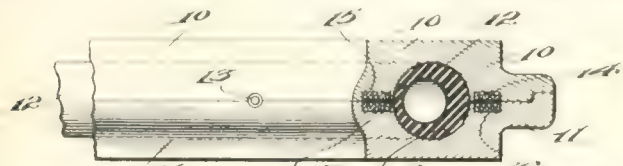


FIG. 1.—Mold for curing Single Tube Tire. Description: 10, 11, upper and lower halves of mold; 12, rubber tire; 13, valve stem; 14, 15, coils for magnetizing and heating upper half of mold; 16, 17, coils for magnetizing and heating lower half of mold.

engineer for The Diamond Rubber Co. (Akron, Ohio), and an expert both in mechanics and electricity. Patents have been secured by him in Great Britain, France, Germany, Belgium, Holland, Italy, Switzerland, Russia, Finland, Japan, Australia, Mexico, Canada, the United States, and some South American countries.

The inventions consist, broadly stated, in making use of an electric current, to close the parts of a mold, or the platens of a press, and also to heat electrically the molds or the platens and thus effect vulcanization.

The currents used are preferably the direct, for closing, and the alternating, for heating. While neither current is strong enough to be in the slightest degree dangerous, any degree of heat up to 400° F. is easily obtained, and may be controlled with absolute accuracy for any length of

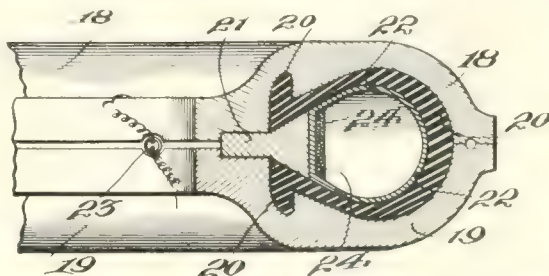


FIG. 2.—Mold for curing Clincher Tires. Description: 18, 19, upper and lower halves of mold; 20, clincher tire; 21, key piece; 22, inflating bag; 23, valve stem; 24, single magnetizing and heating coil with wires running through valve stem.

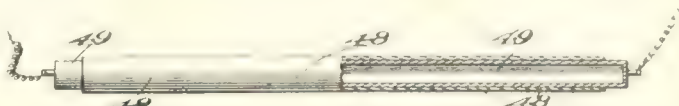


FIG. 4.—Curing Hose. Description: 47, mandrel; 48, rubber covering to be vulcanized.

whole interior is electrically heated and vulcanization goes on. Of plans for heating mixing and calender rolls, of curing dry heat goods such as shoes, clothing, dress shields, etc., no specific mention is made, although they all come under the broad claims that are allowed. No adaptation of the new process however, seems to fit the curing of dipped goods, and that seems to be the only exception as far as general lines go.

The electric heat is developed by placing magnet coils in recesses or grooves in the faces of the platens or molds, connecting with an alternating current, which establishes rapidly alternating magnetic fields with the attending hysteresis effects, and foucault or eddy currents. The mold is closed by the magnetic attraction of its parts induced by an electric current passing through coils imbedded in the parts of the mold.

A magnetic press is also used to perform the work of the old hydraulic presses, and is operated by a solenoid—and a series of toggles and bell crank levers.

There are many obvious advantages to the new process. It does away with bolts and clamps for molds, steam chambers for presses and tubing machines, leaky valves, and new packing, and it is claimed that the actual cost of operation is about one-half of that of steam.

## CONCESSIONS FOR "ALMEIDINA" GUM.

WHILE not much has been heard recently in regard to the grade of rubber known as "Almeidina," it appears that interest in it has not died out in the country of its production. The Portuguese *Diário do Governo* of September 24 contains a royal decree authorizing the government to grant to Portuguese companies legally constituted, to Portuguese subjects, or to foreigners who undertake to establish Portuguese companies, concessions for the exploitation of the "Almeidina" rubber plant (*Euphorbia tirucalli*) in Angola, on certain conditions, the details of which we hope to present later.

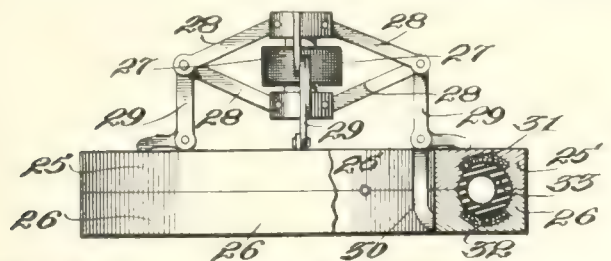


FIG. 3.—Closing Device for Molds or Presses. Description: 25, 26, the mold; 27, electro-magnet or solenoid; 28, toggle levers; 29, bell crank levers; 30, pivotally fulcrumed arms; 31, 32, coils for heating; 33, tire.

time, while by the direct current the mold or press may be closed, and any pressure needed for rubber work be exerted and continued until the current is turned off.

The molds, platens, or formers—that is, the heating surfaces—must be made of a magnetizable metal, either soft steel or cast iron being the best. Soft metal molds such as are used in hard rubber work could not be magnetized and heated, although they could doubtless be used in a press or vulcanizer that was itself electrically heated.

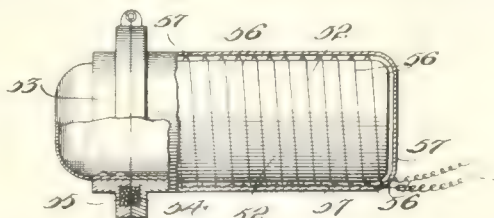


FIG. 5. Description: 52, vulcanizer; 53, door; 54, 55, magnet coils for closing door and for heating the vulcanizer; 57, protective casing.



## THE ASTFALCK QUICK PRESS SYSTEM.

FROM Germany THE INDIA RUBBER WORLD has received a description of a "System for hydraulic presses for vulcanizing rubber goods," known as the Astfalck system, that is interesting. Allowing for the lack of illustrations, and for the difficulty that the translator had in comprehending technical terms, and eliminating descriptions of qualities that all of the best makes of presses have in common, there still remains much of value in the article, which follows:

"In order to avoid any disadvantageous sagging, these presses are provided with a number of plungers, are so constructed that no harmful warping can arise from the heating and cooling of the machine. To provide for the greatest possible uniformity of expansion in the upper and lower parts of the press, without detrimental action of the friction upon the dead weight, a compensating device has been added which consists essentially of two cast iron tubes or pipes connecting the nether press heads, these tubes being warmed and cooled in the same manner as the follower.

"Moreover the entablatures rest upon rollers so that the expansion and contraction of the press from heating and consequent cooling may proceed unhindered. After placing the material to be vulcanized upon the lower plate—to bring up the table to its effective working point against the upper frame head, economically and without loss of time—there are connected with the entablature so-called advance pressure cylinders, which elevate the entablature as quickly as is compatible with a good oversight of the work in hand. Besides, in this non working movement, which forms the greatest portion of the whole upward motion, there is only sufficient water used to raise the table and at the same time to overcome the resistance of easy friction and added speed; for, in consequence of a peculiar arrangement of valves, during this process the press cylinder proper is filled with the running water contained in a low standing tank, without the aid of any other mechanism. As soon as the material to be vulcanized is brought up to and in contact with the upper head of the press, any desired pressure may be obtained by the movement of a hand lever which operates the necessary valves and said pressure may be maintained in the press for any desired length of time. The vulcanizing having been accomplished, a short lever movement opens other valves, the pressure is released and the sinking of the entablature takes place rapidly without the use of water pressure. In the release by means of the valve motion an extremely rapid fall of the lower table is effected and at the same time an easy dislodgement of the vulcanized material is made possible.

"For all the movements of the press—viz.: The quickest upward non working motion, the real pressure work, and the most rapid return after work has been accomplished—only one short easily moved lever is necessary; and what is more, this motion of the lever is always in the direction of the press motion desired: up, for an upward movement, and down, for the downward movement, so that all chances of mistakes are eliminated.

"The qualities of the water saving device, 'System Astfalck' which are applied to these presses, permit not only of the quick motions above described but require withal so little water for pressure purposes that only a very small high pressure accumulator and a very small pump are sufficient to serve several such presses, which means small requirements of power from a power plant, not to mention light transmissions. Hence the operation of two hydraulic vulcanizing presses each having a pressure capacity of 675 tons, together with one press having a capacity of 350 tons gross pressure, working under normal con-

ditions—two complete operations for each press per hour—would call for only one small water accumulator of 20 to 30 liters contents and a small pressure pump of  $\frac{1}{2}$  to  $\frac{3}{4}$  HP.

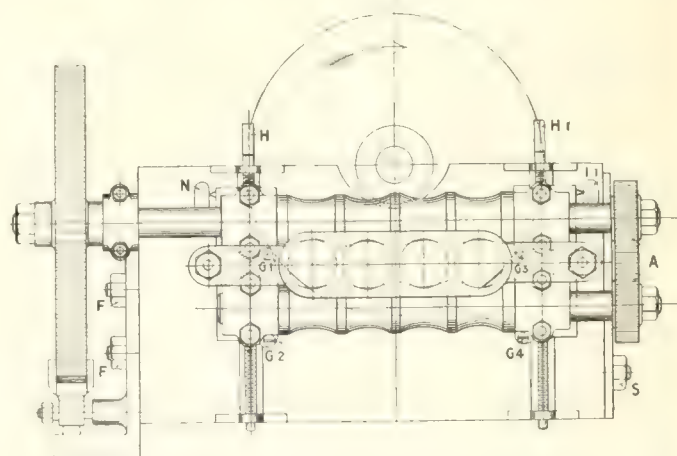
"For filling the pressure cylinder in its upward non working motion there is generally provided a small water tank which is connected with the valves of the press by means of a pipe sufficient to afford rapid delivery and discharge. Since, however, the press pump obtains its supply from this tank, and the press cylinder discharges its spent water into it, the same water is used over and over again, whereby on the one hand, a longer life is guaranteed to all the working parts of the machine, and on the other hand the possibility of adding a lubricant to the water is at hand.

"The pressure pump is connected up with the accumulator in such a manner that the accumulator in its highest position automatically cuts off the water from the pump and when water is needed opens the supply, so that the pump does not have to wait at either end. Moreover, the pump is provided with a loose pulley so that it may be thrown out altogether when it is desired to hold the press for any length of time under pressure.

"By virtue of the above described devices the service or attention to the whole plant becomes a very simple matter, for the man in charge has nothing more to do than, with a lever, to initiate the desired motion of the warming table and all the rest follows automatically."

## A NEW TYPE OF RING CUTTER.

A MACHINE that cuts 80,000 jar rings in a ten hour run is shown in the accompanying illustration. It is arranged to cut up tubing of varying diameters, the cutting knife making 15,000 revolutions a minute. To cut a tube of particular diameter there is a guide which is inserted in the machine in the following manner: The nuts *E, F, F<sup>1</sup>* are first loosened and then the front iron guide and the back brass guide are then both removed from the machine, the latter by loosening the four screws *G<sup>1</sup>, G<sup>2</sup>, G<sup>3</sup>, G<sup>4</sup>*, and the two studs *H* and *H<sup>1</sup>* to the left



and to the right, are screwed in until the index points for the two scales plates *I* and *I<sup>1</sup>* indicate the proper number. When this is done the guides may be inserted and the nuts *E, F*, and *F<sup>1</sup>* are screwed on, and then four tubes are inserted through the front guides and the scale which is found on the rear part is then adjusted for the thickness of the rings to be cut and the machine is then ready for operation. The adjustment of the rear scale is made in the following manner: The index hand is screwed to the zero point by means of the studs, then the machine is revolved by hand until the support has exactly reached its lowest position. The two screws are then loosened

and the scale is shoved up until the stop just touches the carrying lever, then the two screws are again fastened and the index hand placed opposite the number on the scale by means of the spindle; that is, the number which indicates the thickness of the rings to be cut. Special attention must also be called to the following points: First, that when screwing the studs *G*, the cog wheels *A* must be disconnected; second, that the cog wheels after being placed in mesh do not engage too hard; third, that both the index hands over the scales *I* are exactly adjusted to the same relative position. [Max Müller, Hanover-Hainholz, Germany.]

### RUBBER AT A CARRIAGE SHOW.

**I**N connection with the fifteenth annual convention of the National Carriage Dealers' Protective Association, held at the Grand Central Palace, New York, October 10-15, there was held the eleventh annual exposition of vehicles and accessories. In this exhibition, spread over several floors of the great building, India-rubber was in evidence everywhere, but chiefly on the hundreds of finished vehicles on display, and in the shape of tires. Some of the carriage dealers seen stated that at least 90 per cent. of their orders to-day, whatever the type of vehicle, specify rubber tires. The exhibits made by the tire manufacturers were good, but seemed fewer in number than at some former conventions, which is probably due to the fact that the trade has not now so many novelties to exhibit as in earlier years, besides which there is a tendency among the rubber manufacturers, on account of the heavy cost of making displays, to comply less freely with invitations to place their goods on exhibition. The tire manufacturing companies making displays were the following:

The Diamond Rubber Co. (Akron, Ohio).—Solid pneumatic tires; especially solid tires of the "417" compound.

The Goodyear Tire and Rubber Co. (Akron, Ohio).—Solid and pneumatic tires, tire applying machinery, and a new wire drawing machine.

The Hartford Rubber Works Co. (Hartford, Connecticut).—Solid and pneumatic tires, and rubber prop blocks.

India Rubber Co. (New Brunswick, New Jersey).—Solid and pneumatic tires.

Morgan & Wright (Chicago, Illinois).—New three wire solid tire, standard solid and pneumatic tires, horsehoe pads, two types of tire applying machines, and a joint closing machine.

Milwaukee Rubber Works Co. (Cudahy, Wisconsin).—The Fawkes tire, and standard solid tires.

Pennsylvania Rubber Co. (Jeannette, Pennsylvania).—Solid and pneumatic tires.

The Sweet Tire and Rubber Co. (Batavia, New York).—Solid tires, and machine for applying them.

Voorhees Rubber Manufacturing Co. (Jersey City, New Jersey).—Solid tires.

Most of the solid tire manufacturers who are represented showed tire stock on reels in 250 feet and 500 feet, which practice seems to appeal strongly to the carriage tire trade at this time.

The Fairfield Rubber Co. (Fairfield, Connecticut) exhibited rubber carriage cloth; The L. C. Chase & Co. (Boston), carriage cloth and Chase leather; Vehicle Apron and Hood Co. (Columbus, Ohio), rubber storm fronts; The Fabrikoid Co. (Newburgh, New York), carriage cloth of "Fabrikoid."

#### RUBBER TIRE STOCK ON REELS.

TEN years ago the head of the leading carriage building firm in New York, though interested in a solid rubber tire patent and prepared to execute orders for rubber tired carriages, as-

sured a representative of THE INDIA RUBBER WORLD that rubber tires on vehicles could never come into wide use, for the reason that there were insuperable difficulties in the way of retaining such tires in their channels, and for this reason owners of carriages could not afford to use rubber tires very far from the factory. The idea was that the tires might require to be returned to the factory very often, and that only an expert could replace a tire which had slipped from its channel. This gentleman is no longer alive, but if he were he would see that it has become not only possible to put on rubber tires that will remain in place until worn out, but that all over the country there are shops, large and small, prepared not only to make repairs of rubber tires, but to make the original application of

them to wheels. A carriage can be equipped with rubber tires to-day at Los Angeles, California, quite as well as at the Eastern factories which supply the material, and any repairs which may later be needed can be



500 FEET OF TIRE ON REEL.

made in the remotest town where any carriage trade exists as well as if the wheels were shipped to the factory where first equipped.

These lines are suggested by the growing practice of the manufacturers of solid rubber tires of putting up tire stock in lengths of several hundred feet, and shipping to carriage makers and repair men in the form indicated by the accompanying illustration from a recent catalogue of Morgan & Wright (Chicago). Besides being a great advantage to the user from the standpoint of economy, say this firm, this method enables workmen to handle tires more conveniently, thus saving time and labor. Wound neatly on a reel and placed in a wooden rack, tires take up much less room in the store or shop, which is an object of interest to those who are obliged to economize in space.

### INDIA-RUBBER GOODS IN COMMERCE.

#### EXPORTS FROM THE UNITED STATES.

**O**FFICIAL statement of values of exports of manufactures of India-rubber and Gutta-percha, for the month of August, 1904, and for the first eight months of five calendar years:

MONTHS.	Belting, Packing, and Hose.	Boots and Shoes.	All other Rubber.	TOTAL.
August, 1904 . . . . .	\$ 66,300	\$179,264	\$ 217,992	\$ 463,556
January-July . . . . .	504,666	472,128	1,382,582	2,359,376
Total . . . . .	\$570,972	\$651,392	\$1,600,574	\$2,822,938
Total, 1903 . . . . .	568,797	507,897	1,655,396	2,732,090
Total, 1902 . . . . .	459,871	524,629	1,298,132	2,282,632
Total, 1901 . . . . .	348,017	394,397	1,203,086	1,996,310
Total, 1900 . . . . .	359,840	350,286	1,000,839	1,710,965

The number of pairs of rubber boots and shoes exported during eight months was 1,228,475, against 1,036,335 pairs for the first eight months last year and 1,124,463 pairs in 1902.

Exports of reclaimed rubber for eight months were valued at \$237,890; same months last year, \$287,561.



## SIXTY YEARS IN THE RUBBER BUSINESS.

JOHN DAVIS VERMEULE, rubber manufacturer, banker, and merchant, at the age of 82 years, is still in active business, strong and alert, and with a health flush on his cheek that a man thirty years younger might well be proud of. Mr. Vermeule was born in Plainfield, New Jersey, September 21, 1822. He is a descendant of Jan Cornelissen Vermeule, who was a prominent citizen of Flushing (Vlissingen), Zeeland, in the Netherlands, and a member of an old Holland family. It was his son Adrian who came to New York in 1699 to visit friends in Harlem. He liked the country and remained, and was town clerk and lecturer of the Dutch Reformed Church for eight years, after which he removed to Bergen, New Jersey. His son in turn became a large land holder and a member of the Provincial congress of New Jersey. Both he and his four sons were soldiers in the war of the Revolution. One of these sons, a grandfather of the subject of this sketch, was judge of the court of common pleas of Somerset county.

It will be seen, therefore, that Mr. Vermeule comes from the best Dutch and Revolutionary stock. In his boyhood he attended Morton's School at Middlebrook, New Jersey, until he was 18 years old, when he became clerk in a dry goods store in New Brunswick. Four years later, in 1844, there came the organization of Goodyear's India Rubber Glove Manufacturing Co., with which corporation he became connected. From the beginning he sustained an important relation to the company, and in time became the largest stockholder. In 1877 he was elected treasurer, and in 1882 president, which latter office he still holds. Under his management the business grew wonderfully; the little red mill at Naugatuck, Connecticut, was surrounded by great factory plants, and the fine goods that the company manufactured not only were firmly established on the market but found constantly increasing outlets. In the course of his experiences as a rubber manufacturer Mr. Vermeule gathered around him some of the best executive and manufacturing ability in the trade, and it is only necessary to cite the names of Van Vliet and Schaffer in this connection to receive a very general assent to this statement.

Mr. Vermeule has many interests outside of the rubber business. For example, he is president of the Holland Trust Co., vice president of the American Savings and Loan Association, and a director in several national banks. His pet project is, perhaps, the York Cliffs Improvement Co., at York Cliffs, Maine, where he has a magnificent summer home. This company own 400 acres of shore land, giving them two miles of ocean frontage which, through Mr. Vermeule's energy and foresight, has been laid out into parks, fine building sites, and in every way improved. He also built personally the Passaconaway Inn, a beautiful shore resort at the Cliffs. His own villa, by the way, is named "Klipanzee," which means in ancient Dutch, "Land and sea." Mr. Vermeule married, in 1846, Mary



JOHN D. VERMEULE.

C. Kelley, a daughter of a prominent Philadelphia merchant. He is an enthusiastic member of the Holland Society, in New York; a patron of the Metropolitan Museum of Arts, and although not essentially a clubman, he is a member of the Reform, Manhattan, Riding, Commonwealth, and Merchants' Clubs. He spends his summers usually at York Cliffs, Maine, and his winters at his home on Forty-sixth street, near Fifth avenue, New York, where, as a lover of books and works of art, he has a most valuable library and many fine paintings.

In 1896 Mr. Vermeule entered the directory of the United States Rubber Co., the India Rubber Glove company having become merged in that corporation, and he has since continued a member of the board.

## JAPANESE WATERPROOF GOODS.

SPURRED to economy by the mother of all invention, the Japanese have learned to utilize every strip of bark, wood, bud, and leaf of their trees and shrubs, and he would be considered a poor workman indeed who failed to realize the value of each tiny strip of forest product. The inventive or adaptive genius of the Japanese compares in some particular fields pretty favorably with our typical New England Yankee. Who other than a Japanese could have conceived such startling ideas in interior house construction? The walls are papered not such as we paper ours, with dazzling splashes of lithographed colors and flowers, but with oiled paper that sheds the rain and moisture, preserves a uniform dryness inside, and graduates the light from without so that it is never dark and gloomy inside, nor too bright for the tired eyes. They light their homes without the aid of glass windows, and in such a way that the eyes can find rest and ease without artificial shading or extra light.

A Japanese makes his oiled paper out of the bark of trees and shrubs. The wood itself is too precious for this work, but the bark is stripped off and converted into marvelous weaves of paper cloth. The fiber of the bamboo, reed grass, and other plants is also utilized in this way, paper cloth being made by hand which for many purposes is superior to our own rubber goods. Rubber is a scarce commodity in Japan, and rubber overcoats, shoes, and similar articles are almost unknown.

How the Japanese workmen succeed in producing such light, gossamer-like paper cloth that will serve all the functions of our heavy rubber goods is a mystery, and, furthermore, it is impossible for the uninitiated to comprehend how they do this out of the material at hand, and at a cost which places it within the hands of all. Oiled paper cloth is astonishingly cheap—cheaper than most grades of our cotton goods. Every one purchases it for one or more of a score of different purposes. It is sold everywhere, and used everywhere. An astonishing amount of bark must be used for manufacturing it.

A raincoat or cloak that can be thrown over the head to protect it thoroughly from a drenching storm can be purchased for less than twenty cents, and this can be used repeatedly for upward of six months or a year. It is so soft and pliable that it can be folded carefully and put away for future use. When again needed it will shake out without crease or wrinkle.

The Japanese truckmen and "rickshaw" coolies carry oiled paper blankets in their vehicles for emergency use. If a sudden storm should come up when perishable goods are being carried, they instantly bring forth their oiled paper cloth and spread it over the top. The rain is shed as though the goods were protected by rubber blankets. It is impossible to wet goods once covered or wrapped with the best quality of oiled paper cloth.—*The Evening Post, New York.*

## NEW GOODS AND SPECIALTIES IN RUBBER.

## DODS CROSS EXPANSION PISTON PACKING.

ENGINEERS long have sought, and rubber manufacturers have tried to produce, a cross expansion packing. Rubber cushions have been tried, wedge shaped pieces, and other designs, but often without satisfactory results. The packing here illustrated was first made and used by



FIG. 1.

FIG. 2.

Henry Dods, an engineer employed at the famous Comstock silver mine, in the absence of any other packing that would meet his special want. This packing is made of layers of duck and rubber placed at a diagonal from every side, and so arranged that an edge of duck faces every bearing. Dods obtained a patent on this packing,

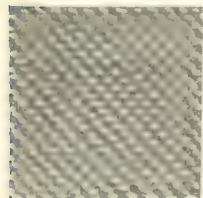


FIG. 3.

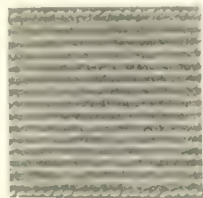


FIG. 4.

which patent has been acquired by the manufacturing company named below. The packing is claimed to have a greater cross expansion than any other; under pressure it will expand 100 per cent. In the illustrations Fig. 1 shows a piece of the Dods square packing under pressure showing an expansion of 100 per cent.; Fig. 2 shows a piece of square packing in general use, which, under the same pressure, expands only 30 per cent. Fig. 3 shows the Dods packing in cross section and Fig. 4 a regular packing in cross section. Fig. 5 illustrates the Dods packing in service. When placed around vibrating or bent rods, or in uneven stuffing boxes, it will hold steam, air, or liquids. Under pressure from the gland it will expand and fill every space, while maintaining a smooth surface against the rod, but without heating the rod. The packing is spiralized and lubricated, and put up in boxes, in 12-foot lengths. [Bowers Rubber Co., San Francisco, California.]

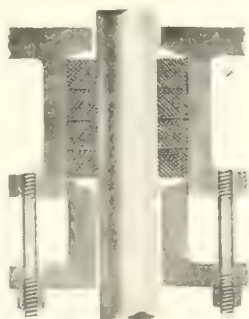


FIG. 5.

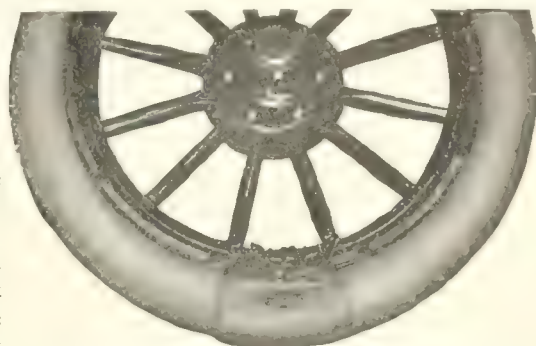
## WATERPROOF LEATHER SHOES.

ONE of the large Brooklyn (New York) stores advertises that it controls the factory making a line of men's waterproof shoes, of which this description is furnished: "Made of kangaroo calfskin, with fine, soft, dongola tops, three heavy soles,

with rubber and oil-silk vamp and sole linings. All seams double stitched and reinforced, so as to insure increased wear." The shoes retail at \$1.98.

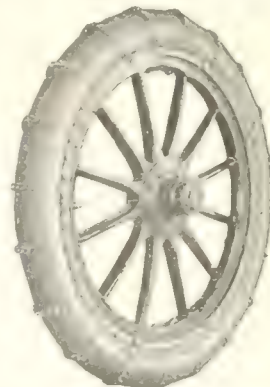
## THE AUTO TIRE PROTECTOR.

THIS illustration relates to a device, a patent on which has been applied for, the object of which is to enable an automobilist to "get home" with an injured tire cover. It is referred to as being made of the same good quality of rubber duck that the best tires are made of. It is laced about the tire by means of ten strong eyelets, set in material of such character that it is impossible for the lacing to pull out. It will run through mud and water without hardening or cracking, as all leather and rawhide will do, and for this reason is more durable than tire boots of those materials. It is adjustable without tools, conforms to tires of any size, is noiseless, and runs as smoothly as a new tire. While this protector had not been intended for solid tires—which are not of the same shape as pneumatics—it had a very satisfactory test on a solid tire at Trenton during the recent State fair. A tire on an observation automobile, carrying 25 passengers, was giving away at the splice, and one of these protectors was put on. It lasted for four days, during which time the vehicle was in constant use, running to and from the fair grounds. The list price is \$4 each, for use on tires not over 4 inches in diameter; for larger sizes, \$4.50. [Empire Rubber Manufacturing Co., Trenton, New Jersey.]



## WEED'S CHAIN TIRE GRIP.

AN effective and compact arrangement for the purpose of preventing the skidding of automobile wheels in soft earth and sandy soil and in snow is shown herewith, an invention which is just being placed on the market, although it has been subjected to two years severe test before being manufactured commercially. It is called the chain tire grip and is the subject of United States patent No. 768,495, issued August 23, 1904, to H. D. Weed. It consists entirely of small sections of chain held around the entire bearing surface of the tire by means of larger pieces of chain each side of the rim. The grip is said to be effective in snow, sand, or ice and its use does not damage the tire whatever. One of the principal merits of the grip is that it takes up almost no room when it is not in use and is being carried on the automobile. It is understood that this device already has met a large sale. [Harry D. Weed, Canastota, New York.]





## A CANADIAN "MILITARY" BOOT.

THE illustration herewith relates to a new rubber boot which is designed to conform, as nearly as possible, to the English military leather boot. It is very straight in the leg, with reinforcement across the instep, the latter being a protection to the boot where the strap goes which holds on the steel spur. The leg of the boot is made very stiff, so as to stand up without wrinkling. The boot is made in bright finish, and in all sizes from 6 to 11, the gross price being \$5 per pair. The manufacturers advise us that this boot has been added to their list in response to a number of inquiries from the Canadian trade. [The Gutta Percha and Rubber Manufacturing Co. of Toronto, Limited.]



## A NEW AUTOMOBILE SHIRT.

AN automobile shirt which lately has been placed on the market gives promise of proving very popular. It is large and roomy, and at the same time light, making it extremely comfortable. It is compact and can be tucked away in a small space. And better than either of these considerations, it is a fine protection against a storm. The front is fastened with a double row of ball and socket buttons. The collar laps over in front and ties with a draw string, making it impossible for water to get down the neck; and the sleeves have elastic bands at the wrists, making it equally impossible for water to enter there. Altogether, it appears to be an



excellent storm coat for automobile use. Goods of this class, by the way, promise to become an important item in the manufacture of water proof clothing in America, where there are already more automobiles than in other countries and motoring is by no means confined to fair weather. [National India Rubber Co., Bristol, Rhode Island.]

## THE NEW KOKOMO AUTOMOBILE TIRE.

AMONG the first to make single tube tires for automobiles were the Kokomo Rubber Co. (Kokomo, Indiana), who state that they early came to the conclusion, since reached by makers and users generally, that single tube tires would not prove satisfactory in this field. This company, therefore, turned its attention to experimenting with the construction of tires of the clincher type, and while convinced that the clincher tire is the most practical now in general use for automobiles, they have felt that a need existed for something better, in the shape of a mechanically fastened tire. The Kokomo company, after long experimenting, is now prepared to offer something new in tire construction, which is illustrated on this page, and which it confidently claims to have superior merit—a tire which, in addition to its other qualities, can be put on or taken off the wheel in the simplest and quickest manner, the only tool required being a small wrench.

It will be seen, from the accompanying cuts, that the tire is easily on to a plain flat metal rim or band, and the retaining flange quickly bolted on. The tire is held in place by metal bands embedded in the lower part of the rubber, these metal bands having lugs welded to them which extend down through slots in the rim, said lugs preventing the creeping of the tire.

The inner tube is first put into the casing inflated and adjusted to its proper place, and does not, like other makes, have to be put into the tire deflated after the casing has first been put on the rim, and then inflated, causing it to be stretched in some places and crimped in others, which is most dangerous to the tube, and which has been a great drawback to detachable tires. Besides, other detachable tires have to be fastened to the rim with several clamps, which interfere with the inner tube and are troublesome to adjust. Rubber valve stems can be used in these tubes, whereas in other makes metal base valves must be used, for they depend largely on their valves to prevent creeping, and consequently these valves are liable to be torn from the tube, rendering the tire useless.

Owing to the manner in which this tire is fastened to the rim, there is no air space lost, and the tire has more cushion on air space, according to the sectional diameter, than other tires of the same sectional diameter. The substantial dimensions of the "lips" and side walls of the casing, and the great sectional diameter of the tire, are other characteristics to which the Kokomo people point with pride.



# RECENT RUBBER PATENTS.

## UNITED STATES OF AMERICA.

ISSUED SEPTEMBER 6, 1904.

- N**O. 769,172. Rubber tire. A. S. Krotz, Springfield, Ohio. [Described in THE INDIA RUBBER WORLD, October 1, 1904—page 17.]
- 769,243. Vehicle tire and fastener therefor. W. O. Worth, Chicago.
- 769,278. Sprinkler and support therefor. L. Secord, Fort Collins, Colo.
- 769,324. Rubber tread [for boot heels and the like]. P. W. Pratt, Boston.
- 769,372. Painting apparatus. [Spraying through hose, by the action of fluid pressure]. J. J. Allen, Portland, Oregon.
- 769,390. Shower ring [for use in shower bath]. W. H. Lawrence, Worcester, Mass.
- 769,393. Fountain pen [with elastic ink reservoir]. P. Molin, Eslof, Sweden.
- 769,405. Joint band [for sectional tires for vehicle wheels]. J. C. Raymond, New York city.
- 769,427. Stylographic pen. D. W. Beaumel, Brooklyn, N. Y.
- 769,451. Surgical pad. W. E. Ambrose, assignor of one half to H. O. Sommer, both of Washington, D. C.
- 769,463. Massage roller. E. Blanchard, Coopersville, Mich.
- 769,554. Fountain pen. H. M. Mannheimer, St. Louis.
- 769,602. Hose pipe or nozzle [for fire departments]. D. Fisher, Oil City, Pa.
- 769,666. Tire. A. Papeux, Lyons, France.

### Trade Mark.

- 43,278. Rubber boots and shoes and rubber for same. Rice & Hutchins, Inc., Boston. *Essential feature.*—The word EDUCATOR. Used since July 15, 1904.

ISSUED SEPTEMBER 13, 1904.

- 769,718. Tire [with core of granular material]. W. Sherbondy and S. H. Sturgeon, Akron, Ohio.
- 769,741. Atomizer. I. Q. Gurnee, Butler, N. J., assignor to American Hard Rubber Co.
- 769,755. Breathing apparatus [for supplying fresh air to workers in foul quarters]. C. W. Madsen, Chicago.
- 769,829. Surgical instrument. I. K. Mott, Cincinnati, Ohio.
- 769,847. Life preserver. A. Tann, Brooklyn, N. Y.
- 769,946. Eraser [for lead pencils]. H. O. Keferstein, Barberton, Ohio.
- 770,080. Device for protecting pneumatic tires. E. Lapisse, Elbeuf, France.

### Trade Marks.

- 43,350. Belting. The Gandy Belting Co., Baltimore, Md. *Essential Feature.*—The word symbol DIXIE. Used since June 1, 1904.
- 43,351. Belting. Same. *Essential Feature.*—The word symbol OXYLO accompanied by the symbol of a cross and circle interlaced. Used since June 1, 1904.

ISSUED SEPTEMBER 20, 1904.

- 770,338. Bathing cap. J. Tooher, assignor to C. J. O'Hern and P. H. Crowley, all of Hyde Park, Mass.
- 770,348. Tire for vehicle wheels. [Pneumatic]. C. Burnett, Durham, England.
- 770,363. Finger-hold for penholders. B. B. Goldsmith, New York city.
- 770,451. Fountain pen. V. L. Capwell, Dorranceton, Pa.
- 770,452. Vaginal syringe. H. Carstens, Chicago.
- 770,457. Automobile coat. R. Fox, New Rochelle, N. Y., assignor to Saks & Co., New York city.
- 770,506. Spraying apparatus [for spraying plants]. F. A. Perkins, Port Dover, Canada.
- 770,531. Pneumatic tired vehicle. C. Mercader, Pittsburgh, Pa.
- 770,611. Detachable pneumatic tire. C. S. Scott, Cadiz, Ohio.
- 770,612. Fountain pen. A. J. Scritchfield and J. E. Scritchfield, Janesville, Wis.

### Trade Marks.

- 43,392. Boot protectors of metal and of metal and rubber. Blakey's Boot Protectors, Ltd., Leeds, England. *Essential feature.*—The representation of a last on which is the representation of a boot;

on the left is a boy and on the right a girl, driving protectors into the boot. On the lower portion of the last is the word PARAGON; the whole enclosed in a border. Used since 1886.

- 43,393. India-rubber shoes and goloshes. Ostasiatische Handels-Gesellschaft, Hamburg, Germany. *Essential feature.*—The representation of a bird's claw and the word CLAW. Used since Feb. 18, 1903.

- 43,401. Waterproof and weatherproof compositions and roofing material treated therewith. The Paraffine Paint Co., San Francisco. *Essential feature.*—The word MALTHOID. Used since Jan. 1, 1903.

ISSUED SEPTEMBER 27, 1904.

- 770,739. Syringe nozzle. R. F. Coleman, Philadelphia.
- 770,752. Dress shield. O. W. Hull, Battle Creek, Mich.
- 770,791. Vehicle tire. W. E. Andrew, Atlantic Highlands, N. J.
- 770,795. Pneumatic tire cover. C. R. Buxton, Palmerston North, New Zealand.
- 770,896. Mold for tires. C. G. Fawkes, Denver, Colo., assignor to the Fawkes Rubber Co.
- 770,914. Rubber sponge cup [consisting of an open elastic cup of rubber, the cavity of which is filled with a body of sponge rubber united to said cup and forming an integral article]. T. C. Marshall, Akron, Ohio.
- 771,094. Hose coupling. S. M. Rhoads, Philadelphia, assignor to Philadelphia Brewery Appliance Co.
- 771,156. Valve for pneumatic tires. J. E. Keller, Jr., Litchfield, Conn.
- 771,175. Vehicle wheel [having a pneumatic cushion between the rim and the felly]. W. C. Potts, Harrisburg, Pa.
- 771,190. Pneumatic tire guard. L. Vanderperre-Simon, Brussels, Belgium.

ISSUED OCTOBER 4, 1904.

- 771,257. Compound for waterproofing fabrics. [A mineral wax, almeidina gum, resin oil, and carnauba wax.] W. M. Mackintosh, Liverpool, England.
- 771,272. Resilient tire. [Pneumatic or cushion.] S. T. Richardson and R. Price, Birmingham, England.
- 771,274. Electric brush. [Hair brush with rubber insulating layers.] A. T. Sanden and V. Sence, New York city.
- 771,296. Protector for pneumatic tires. [Layer of tough and pliant material, to cover the tread.] J. F. Burnam, Madison Station, Ala.
- 771,350. Hose nozzle. F. J. Christman, Syracuse, N. Y.
- 771,360. Fountain pen. A. Eberstein, Winthrop, Mass., assignor to C. Brandt, Boston.
- 771,388. Clamp for closing leaks [for water pipes and the like; involving a rubber packing ring]. F. A. Nusbaum, Dayton, Ohio.
- 771,435. Handle for hand stamps [partly of rubber]. S. W. Metcalf, Sisson, Calif.
- 771,439. Hose coupling. J. F. McElroy, Albany, N. Y., assignor to Consolidated Car Heating Co.
- 771,445. Rim for rubber tired wheels. O. L. Pickard, Chicago.
- 771,538. Wheel rim for follow tires. E. M. Downs, Chicago.
- 771,546. Sponge cup. [Cup made of rubber; having an opening at the top to receive the sponge, the opening being smaller than the body of the cup, and strengthened by a band surrounding the opening.] T. L. Harding and H. E. Heal, New York city.
- 771,600. Douche apparatus. W. J. Bauer, Syracuse, N. Y.
- 771,640. Vehicle tire. [A continuous channel base of metal; a band within said channel, and a rubber tread molded around the band.] W. R. Howe, New York city.
- 771,651. Wheel [having a tire comprising a plurality of sections pivoted directly to the rim of the wheel, each section being independent of the others, and means to cushion each section to the rim]. E. S. Lea, Rutherford, N. J.
- 771,674. Fastening device for pneumatic tires. T. Sloper, Devizes, England, assignor to C. H. Gray, Silvertown.
- 771,677. Machine for making dress shields. A. C. Squires, Akron, Ohio.

### Trade Marks.

- 43,435. Dress shields. C. F. Hovey & Co., Boston, Mass. *Essential feature.*—The word PEARL. Used since Feb., 1893.
- 43,459. Rubber tires for vehicles. The Hartford Rubber Works Co. *Essential feature.*—The word GLADIATOR. Used since Aug. 1, 1904.

[NOTE.—Printed copies of specifications of United States patents may be obtained from THE INDIA RUBBER WORLD, Office at 1 cents each, postpaid.]



## GREAT BRITAIN AND IRELAND.

## PATENT SPECIFICATIONS PUBLISHED.

The number of the specification assigned to the Patent at the filing of the Application, which is the case of those listed below was 10,100.

*(Abstracted in the Official Journal, September 14, 1904.)*

[ABSTRACTED IN THE OFFICIAL JOURNAL, SEPTEMBER 14, 1904.]

- 10,667 (1903). Electric cable. [Relates to the winding of a Gutta-percha covered cable with strips of iron wire passed through Chat-terton compound or other insulating material.] S. G. Brown, London.
- 10,670 (1903). Boot soles and heels. T. Burrell, North Melbourne, Australia.
- 10,804 (1903). Pneumatic tire [with means of attachment to wooden rims]. R. Evans, London.
- 10,815 (1903). Pneumatic tire [having covers provided with tape or webbing to facilitate repairs]. A. J. Clitheroe, Ilford, Essex.
- \*10,826 (1903). Elastic tire [of solid rubber, in which wire staples are embedded to form a cross support for the retaining bands]. J. Coomber and three others, New York city.
- 10,911 (1903). Antimacassar clips [with rubber vacuum pads for the support]. C. T. Gann and F. R. Keef, London.
- 10,941 (1903). Rubber cords [for tire fabrics]. Christian H. Gray, of The India-Rubber, Gutta Percha and Telegraph Works Co., Silvertown, and T. Sloper, Brittox.
- 10,942 (1903). Formers for making pneumatic tires. *Same.*
- 10,943 (1903). Pneumatic tire [of special fabric]. *Same.*
- 11,097 (1903). Exercising apparatus. F. W. Croucher, Fleet, Hampshire.

- 11,163 (1903). Machinery belting [formed of canvas strips, treated with a solution of India-rubber, Gutta-percha, or the like]. A. Hay, Glasgow.

*(Abstracted in the Official Journal, September 14, 1904.)*

- 11,171 (1903). Golf ball [marked with a view to giving the player a line of sight upon the ball in the direction in which he wishes to play]. G. W. Dawes, Roslyn, Lancashire.
- 11,197 (1903). Boot heels. B. Hopkinson and two others, London.
- 11,207 (1903). Method of molding pneumatic tire treads. W. P. Thompson, Liverpool. P. Eichmann, Frankfurt o/M., Germany.
- 11,291 (1903). Dress shield. [Means of retaining it in place when worn.] J. P. Wille, London.
- 11,294 (1903). Pneumatic tire protector. [A cover of interlaced metal rings, with a leather backing.] C. Keddie, London.
- 11,321 (1903). Life belt and deck seat combined. C. H. Le Mout, Hamburg, Germany.
- 11,345 (1903). Elastic tire. [A thin steel tire of elliptical section, having an India rubber tread.] W. Scott, Plymouth.
- \*11,391 (1903). Hose coupling. F. E. Paradis, Chicago, Illinois.
- 11,508 (1903). Heel protector. G. R. Holding, London.
- 11,651 (1903). Rubber threads and fabrics [for pneumatic tires, hose pipes, and the like]. C. H. Gray, Silvertown, and T. Sloper, Brittox.
- \*11,656 (1903). Golf ball and method of manufacture. F. H. Richards, Hartford, Connecticut.
- \*11,657 (1903). Golf ball and method of manufacture. *Same.*

[ABSTRACTED IN THE OFFICIAL JOURNAL, SEPTEMBER 14, 1904.]

- 11,785 (1903). Golf ball making machine. [For winding rubber tape or thread on cores.] M. McDaid, Edinburgh.
- 11,895 (1903). Nursing bottle [with rubber tube inserted through the stopper]. M. D. Armstrong, Forest Gate, Essex.
- 11,904 (1903). Pneumatic carpet cleaning device. S. Harvey, Nottingham.
- 11,007 (1903). Nursing bottle. G. Raines, London.
- 12,059 (1903). Golf ball [with core made from a length of rubber tubing, which is stretched on a stepped mandrel and while in high tension longitudinally is rolled back on itself, producing a ring] P. A. Martin, Birmingham.
- 12,066 (1903). Rubber heel and sole. C. D. Douglass, Belfast.
- 13,110 (1903). Horseshoe pad. G. Topp, Frankfurt o/M., Germany.
- 12,204 (1903). Deformity appliance. [Plate of rubber, stiffened with steel wire and held in position on the toe by rings and bands.] H. J. Pond, Norwich.
- 12,211 (1903). Horse collar with pneumatic pad. J. E. ChiloteGuy, Buenos Ayres, Argentina.
- 12,307 (1903). Boot heel and sole. G. Looms, Market Harborough.
- 12,319 (1903). Corset [with rubber breast forms]. M. J. Teufel, Stuttgart, Germany.

[ABSTRACTED IN THE OFFICIAL JOURNAL, SEPTEMBER 14, 1904.]

- 12,427 (1903). Pneumatic tire. [Relates to means of attachment to rim.] J. von Zastrow, Dinker, Westphalia, Germany.
- 12,576 (1903). Scraper for cleaning printers' rolls. J. Honeyman and A. Smith, Liverpool.
- \*12,603 (1903). Bottle stopper [with rubber disc]. H. C. Heide, London. (A. L. Weissenthanner, New York.)
- \*12,613 (1903). Fountain pen. H. B. Levy, New York city.
- 12,647 (1903). Tire for railway cars. F. Stephan, Muhlhausen, Germany.
- \*12,717 (1903). Golf ball [in which driving power is obtained by employing a winding of stretched and twisted rubber strips, by means of which a large number of air cells are formed in the ball]. K. V. Painter, Cleveland, Ohio.
- 12,847 (1903). Apparatus for molding and vulcanizing the covers of "tubeless" pneumatic tires. L. Johnstone, Prestwich, near Manchester.
- \*12,858 (1903). Golf ball. [Described in THE INDIA RUBBER WORLD, August 1, 1904—page 383.] C. B. Elliott, Menlo Park, New Jersey.

## PATENTS APPLIED FOR—1904.

Space is given here only to Applications for Patents on Inventions from the United States.

- 20,395. W. P. Thompson, Liverpool. Means for ascertaining pressure in pneumatic tires. (The Wray Pump and Register Co., United States.) Sept. 21.

## GERMAN EMPIRE.

## DESIGN PATENTS GRANTED [GEBRAUCHSMUSTER].

- 231,162 (Class 3b). Suspenders made of inelastic bands having rubber loops on the front ends. G. Hohn, Goslar. Aug. 24.
- 231,544 (Cl. 63e). Attachment for vehicle wheels, consisting of a soft rubber rim which has in its lower part a metallic foundation imbedded in hard rubber. B. Panzer, Berlin. Aug. 31.
- 231,886 (Cl. 63e). Rubber tire containing a spiral wire tube fastened into the part that enters the felloe. Hannoverische-Gummi-Kamm Co., A.-G., Hannover-Limmer. Aug. 31.
- 231,773 (Cl. 68d). Sound deadener for doors, consisting of a rubber roller running upon a spring. J. Ruschmeyer, Berlin. Aug. 31.
- 232,121 (Cl. 30g). Nursing bottle having a connecting tube screwed into an inside sleeve of the nipple. M. Ochsler & Son, Ansbach. Sept. 7.
- 232,520 (Cl. 15g). Roller on typewriting machine with rubber covering of one piece of which the core consists of a porous elastic substance, pressed together for deadening the sound. M. Erdmann, Finsterwald. Sept. 14.
- 232,479 (Cl. 30b). Rubber plates for fastening lower sets of teeth to the under jaw. G. Wolf, Krefeld. Sept. 14.

## THE FRENCH REPUBLIC.

## PATENTS ISSUED (WITH DATES OF APPLICATION).

- 341,781 (March 31, 1904). E. Verlage. Pneumatic tire.
- 341,817 (March 31). A. von Lude. Method for fastening pneumatic tires to motor wheels.
- 341,877 (April 5). J. P. Ebray. Double air chamber.
- 341,902 (April 6). L. Lancier. Anti slipping device for tires.
- 341,906 (April 6). J. Rejzek and R. Jelen. Removable rubber heel for shoes.
- 341,984 (March 7). T. E. A. Jouard. Solid rubber rim wheel, with spring spokes, for motor cars.
- 342,062 (April 9). Levy. Pneumatic tire.
- 342,070 (April 11). J. de Pontonx. Tires for automobiles.
- 342,151 (April 7). L. O. Lecocq. Elastic tire.
- 342,174 (April 9). C. Minke. Felloe with detachable flange for rubber tires.
- 342,385 (April 16). J. Cerqueda. Anti slipping device for pneumatic tires.
- 342,454 (April 19). J. L. Brown and B. King. Protecting device for pneumatic tires.
- 342,472 (April 20). R. Bellingham and J. Bloomfield. Pneumatic tire.
- 342,638 (April 26). H. J. Gaisman. New elastic woven tissue.

[NOTE.—Printed copies of specifications of French patents may be obtained from R. Bobet, Ingenieur-Conseil, 11, Avenue de Villiers, Paris, at 50 cents each, post paid.]

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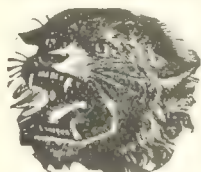
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## THE NEW CABLE TO ALASKA.

THE territory of Alaska, which is daily becoming more and more important from a commercial standpoint, was, previous to October 10, isolated from regular telegraphic communication with the United States and the outside world.

Although telegraph lines have been built under the most discouraging circumstances, connecting the principal government posts in Alaska, it was necessary, in order to reach the United States, to have these messages repeated over English lines running through British Columbia. The severe weather of those latitudes during six months of the year makes it almost impossible to maintain these lines in working condition, and at the same time it was not thought desirable to have the official news of our army outposts transmitted over English circuits.

To obviate this difficulty, General A. W. Greely, chief signal officer of the United States army, drew a plan whereby Alaska could be in direct communication with the home country by the use of a deep sea ocean cable. An appropriation was made by the Fifty-eighth Congress to carry out this plan.

In looking over the situation, it was found that difficulties were to be encountered never before met in submarine cable engineering, as this line was to be laid in a latitude not previously reached by submarine cables. The question of the excessive cold to be met with, the glaciers, that were continually discharging their mountains of ice directly along the course of the cable, and the practically uncharted waters, were a few of the engineering points to be overcome.

The unbroken line of success that was met with in connecting together the various Philippine islands by ocean cables of American manufacture, led General Greely to again pin his faith on *seamless* rubber insulations, and in considering the subject of specifications, he consulted with the company that had manufactured the Philippine islands cable.

It was decided that a copper conductor consisting of nine strands should be used, insulated with: (1) A *seamless* covering of pure Pará rubber; and (2) a covering of vulcanized rubber, also applied in a seamless manner. The conductor was then served with jute, and protected with steel armor wires, having a tensile strength exceeding 200,000 pounds per square inch, these being in turn protected with a jute and asphalt compound.

Three types of cable were designed for this work: (1) The Shore-end, which was protected by a double armor of great strength, the finished cable weighing 20,000 pounds per mile, the Shore end type extending from the landing stations well out into deep water, where (2) an Intermediate type was spliced on, having a single serving of heavy armor wires. After reaching a point 100 miles from the shore, and where a depth of 2000 feet was found, (3) the Deep-sea type, having a lighter armor wire, was laid, this latter being the principal type of cable used, and out of the entire length of 2088 miles, 1500 miles were of this class.

This cable was manufactured at the Bayonne plant of The Safety Insulated Wire and Cable Co. (New York) two ship loads being sent around Cape Horn, and 35 car-loads across the continent.

The great advantage of India-rubber over Gutta-percha as an insulator was readily shown in this work, as the cable shipped around the "Horn" was transported in commercial steamers, and did not require the iron tanks, filled with water, which would have been imperative had Gutta-percha been used as an insulator, to prevent the dielectric from softening, while it would otherwise have been impossible to ship that form of cable in freight cars across the continent.

The conductors were transported to the United States cable-ship *Burnside* at Seattle, and were laid under the personal supervision of Colonel James Allen, of the Army signal service, assisted by officers of his corps. This cable is the longest span having rubber insulation thus far laid, and when it is considered that the greatest depth reached was approximately 10,000 feet (nearly two miles) it will again prove beyond a doubt that rubber insulation, applied by special methods designed by American engineers, has every advantage over the old type of Gutta-percha cable.

In the manufacture of this cable over 365 000 pounds of high grade Pará rubber compound were used, and cable companies need not longer fear the extinction of the Gutta-percha tree, which for twenty years past has been their *bête-noir*.

There are now in actual daily operation approximately 5000 miles of rubber insulated deep sea cables manufactured by the Safety company, covering the extremes of temperature, from the torrid waters of the Philippines to the ice bound seas of Alaska.

This success is evidence of the far sighted policy of the United States government, in trusting to American engineering ability, while at the same time encouraging home industries, a policy which might be followed to the great advantage of our commercial companies in the purchase of future ocean cables.

The distance from Seattle (state of Washington) to Sitka is about 970 miles; from Sitka to Fort Liscum, at Valdez, Alaska, is 565 miles, making a total of 1535 miles from Seattle to Valdez. From Sitka a branch extends to Skagway, a distance of 292 miles, touching at Juneau and Haines Mission. This service connects with the extensive overland telegraph system already established by the United States government in Alaska, and with certain existing submarine communications between military posts, in addition to which is to be considered the wireless telegraph service maintained by the government across Norton sound, between Nome and St. Michaels, a distance of 108 miles. The completion of the cable system was signaled by the sending of the following despatch:

SITKA, ALASKA, October 6, 1904.—*To the New papers of Sitka, from the Associated Press:* The completion of the government cable from Valdez to Sitka, making a complete connection by an all-American line with 46 stations in Alaska, is the beginning of a new era for Alaska. Wagon roads and railways will open up the greatest mining center of the world. Other industries will quickly follow and insure this country's future prosperity.

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## ANOTHER PACIFIC CABLE PROPOSED.

ARTICLES of incorporation for the North American Telegraph Cable Co. were filed at Seattle, Washington, on May 5, 1904, which provide for the building of a submarine cable from Seattle to Valdez and other points in Alaska, and thence to Vladivostock, Russia. The incorporators were Judge Thomas Burke, Robert Moran, A. E. Lathrop, J. T. Flynn, and other residents of Seattle. The last named is editor of *The Midnight Sun*, a Seattle journal devoted to Alaskan commerce. Judge Burke represents the interest in the enterprise of the Great Northern railway. It is the intention of the company to interest capital in extending the United States government cable to Russia, this making another length across the Pacific ocean. Nothing, of course, will be done until the end of the Russian-Japanese war, when active steps will be taken to complete this work. The Seattle-Valdez cable being a government line will, of course, be open to transmit all messages for the new company as far as their line extends, where it is the intention to transfer them to their own cable.



## THE SINGAPORE GUTTA-PERCHA TRADE.

EDITORIAL NOTE.—"THE STRAITS TIMES" (SINGAPORE).

YOUR informant on Gutta adulteration evidently knows very little of the article, and his fantastic and misleading statements ought, I think, in the interests of the reputation of Singapore trade, to be contradicted.

The shipments of Gutta from London to Singapore represent to a great extent Singapore consignments sent back to their unlucky shippers. The principal consumers of Gutta having now their buyers in Singapore, will buy nothing in the London market, and certain qualities were absolutely unsalable in London, although prices in Singapore had gone very high. The consequence was that several lots have been brought back.

If Balata has been imported, it must have been in quantities of not very much importance. Besides, as you know, there are hundreds of different sorts of Gutta, worth from \$5—up to \$700—per pikul [=133½ pounds], according to their special merits.

Every small place where the article is collected sends to Singapore different sorts, which you must divide again into different gradations according to quality, so that every single piece of Gutta has to be valued separately and you must even cut them through, because you mostly find that the inside of a piece is quite different to the outside. You also probably will know that a very large quantity of this Gutta has always been boiled and mixed again in Singapore by half a dozen large Chinese dealers. This is done partly to utilize numerous small lots of Gutta which on account of their irregular supply cannot be sold as they are, and many pieces refused by the European buyer on account of their adulteration with wood or stones, which for that reason have to be cut into small pieces and cleaned.

The reboiling is also done to utilize inferior qualities, which unless mixed with better qualities would much sooner deteriorate, and many hundreds of tons of Soh and Jolotong, worth from \$5 to \$15, have been so treated every year ever since the export of Gutta from Singapore began. The Chinaman, as long as he hopes to deceive the buyer, will evidently try to put into his mixture as little as possible of the good expensive Gutta and as much as possible of the low kinds. The buyer knows all this very well, but, as it would not be more convenient for him to do otherwise, has always taken the many sorts of reboiled Gutta, which the Chinamen prepare, trying to be as careful as possible, in order not to pay for it in excess of its actual value.

You will see from this that if the mixture of Gutta with Soh and Jolotong worth \$5 to \$15 has never done any harm to the Singapore trade it must be absurd to say that any mixture with Balata, which is a superior sort of Gutta worth from \$100 to \$200 per pikul, can have had any such effect. If any such mixture has taken place, which seems strange, considering the high price of Balata compared to inferior sorts of Gutta formerly used, it would have had only the effect to improve the average quality of reboiled Gutta. That the quality of all Gutta sorts (genuine more than reboiled) has been getting poorer and poorer for the last 20 years is quite true, but the reason for this has nothing to do with adulteration in Singapore. It is from the jungle that a lower Gutta is brought out, partly because the plants giving the better qualities have more and more been destroyed, partly because the natives, on account of the very high prices, found it easier to sell even inferior quality and do not take the trouble to prepare the Gutta so carefully as formerly. To say that adulteration in Singapore can have anything to do with the decreased exports is absurd.

The demand has naturally ceased last year on account of the completion of some large cables. The manufacturers having

no new orders for cables cannot buy. We are going now through a period of stagnation, due to want of demand, which it is hoped will cease if new cables have to be constructed. The trade has not gone elsewhere, as your informant says, and there is no reason to think it will shift to any other place unless the reputation of the market is damaged by alarming statements. Yours faithfully,

X.

Singapore, September 7, 1904.

\* \* \*

EDITORIAL NOTE.—The above communication to *The Straits Times* has been called forth by the recent publication in that journal of some articles on the Gutta-percha trade, one of which was copied into the August 1 issue of THE INDIA RUBBER WORLD (page 379). The point made by the Singapore journal was that the trade in Gutta percha had been injured by the wholesale adulteration alleged to have been practiced, and reference was made to the use of Balata for this purpose. The latter supposition appears to have been strengthened by some statistics presented by THE INDIA RUBBER WORLD, relative to certain exports from London to Singapore. The article above reprinted apparently is from a well informed source, and no doubt fairly represents the situation; *i.e.*, less Gutta-percha has been shipped lately because the demand was less, and present prices of Balata would preclude the use of that material as an adulterant. THE INDIA RUBBER WORLD has not claimed to possess definite information on all the points involved, but has sought to arrive at the facts, and the article signed "X" appears to explain satisfactorily the London exports to the Straits. At the same time, it cannot be assumed that the supply of Gutta-percha is unlimited, and it will be of interest to note the effect upon prices of the next large increase in demand.

## ROENTGEN RAYS IN CABLE MAKING.

AN interesting application of Röntgen rays in cable manufacture is described by W. Otto in *Electro* (Berlin, August). The chief value of this apparatus is in detecting foreign substances and imperfections in the India-rubber or Gutta-percha insulation of electric cables. The apparatus is of particular value in preparing submarine cables, since here defects which might ultimately give much trouble and cause great expense for repair are easily detected. The device consists of a table containing the necessary regulating apparatus. On this a Röntgen tube is fixed, and above it is placed the fluorescent screen. The cable to be examined is passed through guides, which conduct it just below the screen, so that the shadow of the cable is thrown upon the screen. This arrangement allows the cable to be passed through the testing apparatus quickly. Any foreign substances or a bubble of air, or even a bad joint in the rubber, is at once shown. It is convenient to have the apparatus portable, so that it may be taken to any part of the works.

A MOVEMENT is on foot at Montreal to organize a "technical institute," to afford opportunities for the better training of factory employés who may wish to become more proficient in their respective lines of work. The cause is heartily supported by some of the manufacturers, including Mr. D. Lorne McGibbon, general manager of the Canadian Rubber Co. of Montreal, who writes a strong letter to the *Montreal Star*, pointing out the great benefits to German industry of the technical schools in that country, the growing interest in technical education in the United States, and how Canada may be benefited by similar methods.

## SETAUKET RUBBER FACTORY BURNED.

THE principal buildings comprised in the rubber plant at Setauket (Long Island), New York, were destroyed by fire early in the morning of October 18. The fire was first seen by the village baker about 2 A. M., and John Kashaw, a factory foreman, is reported as saying that flames were raging in three places when he arrived, 20 minutes later. At 6 o'clock the buildings were in ashes. On account of repairs in progress on the boilers there was no steam on, and the water tank was empty. The premises were in use (1) by B. Elberson & Co., in the manufacture of rubber heels; (2) by the Anchor Tire and Rubber Co. in making mold work, in a small way; and (3) by W. C. Coleman & Co., in grinding hard and soft rubber scrap. Only the Coleman company were not completely burned out. They lost some machinery, but their stock was stored in a three story warehouse, 50 X 75 feet, located at some distance from the buildings that were burned. How the fire originated has not been explained, and there are conflicting statements as to how fully the property was insured. The amount of the loss is reported as high as \$150,000.



THE SETAUKET RUBBER PLANT.

[From a letter head of one of the Elberson companies.]

The Long Island Rubber Co., incorporated under New York laws, began in Setauket, Long Island, in 1876, the manufacture of mechanical rubber goods, under the management of Robert S. Manning, who had been employed before by the Hamilton Rubber Co., of Trenton, New Jersey. The premises occupied had formerly been used for a piano factory. This company went into liquidation in 1879, at which time the L. B. Smith Rubber Co. was incorporated under New York laws, and began the manufacture of rubber boots and shoes. The company was named for L. B. Smith, a farmer of Smithtown, who became the principal stockholder. The company's product was of the grade called "thirds," which was at that time new to the trade and at first proved of slow sale. Later the manufacture of third grade goods became general, and the company met with much competition. At one time they made extensive contracts for the sale of their goods through C. H. Fargo & Co., of Chicago. The Smith company manufactured daily for several years 12,000 pairs of rubbers, and their production proved to be too large for the Fargo firm to handle. In 1888, the latter firm becoming temporarily embarrassed, the L. B. Smith Rubber Co., holding claims against them of \$275,000, were forced to a reorganization. The company was succeeded in June, 1888, by the Brookhaven Rubber Co., a West Virginia corporation, with \$500,000 capital, which company carried on the manufacture of third grade rubber footwear to July, 1894.

On the formation of the United States Rubber Co., in 1892, Charles R. Flint, who was a creditor of the Brookhaven Rubber Co. for crude rubber supplied, and had converted his bills re-

ceivable into stock of the company, put his holdings into the combine in exchange for shares of the United States Rubber Co. The president of the Brookhaven company at the time was Joseph W. Elberson, who had been connected with the Setauket plant since the beginning. The management of the United States company gradually obtained complete control, as witnessed by a contract dated March 9, 1894, and still hold the 5000 shares. Under the same contract, however, the Brookhaven plant was sold to the North American Rubber Co., a New York corporation formed by the Elberson interests, but with the stipulation that rubber footwear should no longer be made at this factory.

The Elberson interest soon procured the incorporation, under New Jersey laws, of the Liberty Rubber Shoe Co., which resumed the manufacture of rubber footwear at Setauket, and they had attained a large output of third grade goods when, in 1898, after active opposition from the United States Rubber Co., they accepted an offer from the latter which enabled them to discharge all their liabilities, the Liberty company or the Elberson interests agreeing not to make rubber shoes before July 1, 1903. The Setauket plant has since been operated intermittently, generally on a small scale, but under a long list of names, including Manhattan Rubber Co., Manhattan Rubber Shoe Co., Iroquois Rubber Co., Montauk Rubber Co., Para Rubber Manufacturing Co., Excelsior Rubber Co., and so on with all of which J. W. Elberson has been more or less actively connected. The Coleman company, however, was an outside enterprise, which had lately leased part of the facilities of the place.

## THE COTTON GOODS MARKET.

APPROPOS of the beginning of the season, when the Rubber industry and the textile manufacturers are supposed to have arranged their plans for the year, a few facts relative to the two trades should be considered timely. In considering the raw material situation, it can be said that the greater part of the cotton in the upland districts of the south has been gathered, and with two more weeks of such favorable weather and equal progress in picking everything in the uplands will be gathered. There will be no top crop and as cotton has opened at one time, relatively speaking, the picking season will be exceptionally short. In the lower half of Texas, picking has been practically completed, and only one-fifth of the crop remains in the northern counties. From the best authority it is learned that this crop is likely to prove considerably smaller than has been counted upon. In the other two big crop years, the picking was continued until well into the following spring, owing to the abundance of cotton and the large top crop. This year there is but little top crop and when cotton now open is gathered, it will all be in. It is contended that 11,000,000 bales will prove the maximum limit, and that the crop may be considerably smaller. This is, in fact, the opinion of the majority of observers. The world's visible supply of cotton shows an increase compared with last year of 577,894 bales, and an increase compared with the year before last of 247,876 bales.

But the fabric end of the market is the most interesting at the present time to the manufacturers of rubber goods. The situation differs in a great many respects from that of last year, but without reference to the adversities of a year ago, it must be said that the rubber people, who at that time refrained from making a yearly contract, preferring to take their chances of buying cotton duck at a lower figure from time to time, suffered substantial losses, and have this year fortified themselves against a repetition by returning to their former custom of



ordering for the entire year. Furthermore, a great many who have always bought from hand to mouth have abandoned that policy and are covering their requirements for the season. Among the first to make contracts this fall, are those who last year experienced great inconvenience in getting satisfactory delivery. A year ago raw cotton was selling at 9½ cents and the mechanical rubber industry was placing its contracts at from 19 to 25 cents per pound, for cotton duck. To-day the duck manufacturers are covered with cotton at from 10 to 10½ cents a pound and the rubber manufacturers are making contracts at about 20 cents a pound. Comparatively few rubber concerns made a yearly contract last November, preferring to buy their cloth as they needed it, and take the chances on having to pay a higher price. This proved to be rather an expensive experiment, as many consumers paid from 25 to 27 cents a pound during the latter part of the season. In fact, the orders came in so rapidly during the late summer months that the manufacturers of duck were compelled to turn them down, and some were obliged to pay 27 cents, as compared with 19 cents, which their competitors who made yearly contracts paid.

It is understood, however, that some contracts have been made at below 20 cents a pound this year. The minimum quantities contracted for by the mechanical rubber people are said to have been 100 per cent. in excess of those of last year, which tends to show a greater degree of confidence in the raw material market on the part of the rubber manufacturers. It would be difficult to find an idle loom in the duck mills at the present time. Not only has the home demand increased sufficiently to put them all at work, but the demand for export has eclipsed the call for many years. During the past fortnight the Japanese government has ordered more than 1,000,000 yards of standard duck to be delivered as soon as the mills can turn them out. These contracts have been distributed among all the duck mills in this country. The recent burning of the LaGrange, Georgia, mill, one of the plants of the United States Cotton Duck Corporation, has made it necessary to place these orders elsewhere for execution, and the rubber manufacturers have no need to fear about deliveries being made in regular order. If there are any mechanical rubber concerns who contemplate purchasing on the hand to mouth principle, it may be to their advantage to know that spot duck is worth at the moment 20 cents, but delays may be dangerous, for the duck manufacturers have bought their cotton, and no matter how low the staple may decline the fabric market will not ease off, but is more likely to advance on account of the independence of the cotton manufacturers, who are not looking for much more business.

Readers of THE INDIA RUBBER WORLD may recall an article published in these pages three months ago, in which it was predicted that the price of duck would be based on 10 cent cotton, which situation appears to have materialized.

From the standpoint of the mechanical rubber manufacturer, the outlook is bright, so far as the textile end is concerned. They consider the present condition of the market greatly in their favor when compared with that of last year, and if the raw rubber market does not militate against them, there is no reason why the coming year should not be a profitable one. Certainly, they have an easier road to travel in considering their cotton cloth purchases. The finer yarn goods, such as osnaburgs and light-weight sheetings, have not materially changed, although the market is firmer than last year. Consumers of this class of goods are not hesitating on account of prices, but are ordering as their necessities dictate. The time is past when the possibility of lower prices can be considered any inducement for them to wait.

## THE DEFLATED TIRE.

[FROM "THE FINANCIAL NEWS" (LONDON), SEPTEMBER 17.]

IT must be rare that an event in the history of a company commands such widespread interest as that which the Dunlop Tyre Company celebrated last night—the expiry of its famous patent. Premonitions of the event have of late been forced upon the notice of the cyclist most innocent of cycle company lore in the attractive reductions in the price of "outer covers," by announcing which the man at the cycle shop has tempted his customers to re-cover their wheels; and the directors and managers of the great company itself, so far from keeping quiet about the withdrawal of the legal monopoly for the famous "wired-on" tire, have boldly taken the bull by the horns, and given to the event the *éclat* of a public banquet. In this they have shown themselves wise, as well as bold. Silent treatment of the matter would not have avoided the public knowledge of it, or the access of competition which its coming will mark, with the consequent necessary revision of trade prices; whereas a dinner, with invitations to the press, and speeches, and all the other concomitants of publicity, brings something additional to the general knowledge: it reminds the public that, though left without the law's protection of privilege for its patents, there is life and vigor in the old dog yet. The old firm has not the smallest intention of retiring before the swarm of competitors who may be expected to rise up against it now that competition will be upon more equal terms; and so, though the festive proceedings last night could not avoid the appearance, to an extent, of a funeral collation, they may also be taken as the celebration of a Phoenix-like rebirth—in more business-like language, a rattling advertisement for the company now commencing to trade under the new auspices. The company deserves its advertisement. The cyclist, short of cash, may have found the price of a new Dunlop-Welch tire somewhat oppressive at times (though reductions have been made of late years); but, being no longer the "cad on castors," upon whom the *Sporting Times* lavished its vituperation in days gone by—and no longer so, mainly because Mr. Dunlop and his company made cycling an amusement and a means of locomotion in which everyone could, and did, indulge—the cyclist is not an ingrate; and he cannot altogether repress affection for the undertaking whose invention has sped him so many blissful miles.

That is where the Dunlop company is bound to retain a pull over its competitors for many years to come. Critics of its finance point to the thumping sum for goodwill which appears in its assets—and, true, it is somewhat of an awe-provoking amount, and one which, no doubt, the board will very considerably reduce when it reorganizes the company's finances to suit the changed conditions—but the company has acquired, and will retain, a very substantial goodwill. In the days of their patented protection Dunlop tires made for themselves a name of excellence, and it will be long before a purchaser, offered the choice at equal, or even approximately equal, prices, between a "Dunlop-Welch" and a "Brown-Jones," will hesitate in his selection. Probably he will become more attached to the Dunlop than ever; for he will not only have old association to guide him, but the thought that if in their privileged days these tires were among the best on the market, they are still more likely to be among the best now that the privilege is withdrawn, and the company has to fight for its trade upon conditions equal save for such advantage as its name may give to its wares. Meantime, we may express a hope that the competition to which the Dunlop company is now to be subjected will not be carried too far. Competition is a healthful tonic;

but the most healthful of tonics may be taken in overdoses. The Dunlop company has struggled vigorously against competition in the past by buying up competitors, such as the Palmer, the Clincher, the Westwood Rim—but their name is legion; and, by ordinary market methods, or by amalgamations, it will probably so deal with competitors in the future. That is a matter in which the public may stand aside, so long as it gets served with good articles at reasonable prices, and so long as the competition is home competition; but there are threats and prospects of foreign competition, now that the protection of the patent is gone, and as that menaces the employment of English workmen, it will not be proper for the English public to stand aside; it will be its business to see that the Dunlop company—and, of course, its competitors within the kingdom equally—gets protection of another kind; for our admiration of the Anglo-French *entente* cannot be carried to the pitch of watching the English tire trade handed over to the French manufacturers.

### THE END OF THE DUNLOP (WELCH) PATENT.

ON the evening of September 16, at the Hotel Cecil (London), a company numbering over 400 assembled at dinner, in response to the invitation of the chairman and directors of the Dunlop Pneumatic Tyre Co., Limited, "in honor of the expiry of the Welch patents." Mr. Harvey Du Cros (the chairman of the company) presided.

Mr. Arthur Du Cros, in proposing the toast of "The Guests," said that many of the gentlemen present had helped to elevate the cycle industry to the foremost position among British industries. Although the trade had seen many vicissitudes and many changes, still they might justly be proud of the position to which it had been brought by the energy and ability brought to bear. The success of the Dunlop tire had been due to its reliability, and in this matter the colonists had materially assisted. The English trade had successfully withstood the shock of foreign competition, where other industries had seriously suffered. Their foreign friends had thought the British nation was not only slow to move in such matters, but slow to think; but he thought they might now congratulate themselves on the fact that they had overtaken the long lead that the foreigner had obtained on them in the motor industry, and were to-day racing him neck and neck for the premier position. Certainly this company had broken all records in regard to all cases connected with patents. This dinner had been given to celebrate the reaching of the end of the first volume of the history of the invention. The possession of a patent was not an unmixed blessing. Ordinary business was sufficiently trying; but, having regard to the bitterness and jealousy surrounding a successful invention, they could not view the expiry of a patent with feelings other than those of relief and equanimity. Messrs. Walter Hewitt, Frank Bowden, and G. Vernon Pugh responded to the toast.

"Our Hosts" was then proposed by Mr. Eadie. Mr. Harvey Du Cros, in responding, said that, while the Welch patent expired that night at 12 o'clock, the Dunlop motor-tire patent would continue for another nine weeks; but from now the price of automobile tires would be reduced to the amount charged by foreign standard makers.

The advent of the midnight hour, and consequent expiry of the Welch patent, was marked by an interesting ceremony. The official document relating to the patent was solemnly consigned to the flames, amid the strains of Chopin's "Funeral March" and the tolling of a bell in a grandfather's clock, situated behind the presidential chair. Then Mr. Du Cros pro-

nounced an elegy in the following words:

"Here lies Welch; he was saddle or arched shaped; he rested on a median convexity; his boundaries were inextensible; he dies, and yet he lives—no longer for the few but for the use of all. According to Irish custom, this is his wake; these are his ashes. But according to another monumental legend, there arises from these ashes a phoenix. That phoenix is Dunlop, the manufacturer. Welch is dead—Dunlop lives. He, too, is saddle or arch shaped; his median convexity is the world; his boundaries are extensible—may they extend. Long live Dunlop!" (Loud applause.)

The proceedings were diversified by an agreeable concert.

### RUBBER INTERESTS IN EUROPE.

#### GRAND PRIZES FOR THE CONTINENTAL COMPANY.

THE international jury of awards at the Louisiana Purchase Exposition at St. Louis awarded two grand prizes to the Continental Caoutchouc- und Guttapercha-Compagnie (Hanover, Germany). The first was for their exhibit of pneumatic tires of the widely known "Continental" pattern, and the second for their extensive display of balloons for meteorological purposes and for details of balloon construction.

#### A NEW ENGLISH COMPANY.

KENSINGTON Rubber Co., Limited; registered September 26, 1904. Capital, £1000 in £1 shares. Object, to carry on the business of manufacturers of and dealers in India-rubber materials, goods, wares, and articles of all kinds, including inner tubes and outer rubbers for pneumatic tires for cycles, motor cars, and other vehicles, insertion sheeting, hose and general piping, brake blocks, mats, valves, and washers, etc. No initial public issue. Registered without articles of association.

#### AUSTRIA-HUNGARY.

HERR ADAM ZINKHAN, for many years chief of the shoe department of the Oesterreichisch-Amerikanischen Gummifabriks A. G. (Wien-Breitensee), has retired from the rubber business, the first named firm being absorbed on agreement by the Vereinigten Gummiwaren-Fabriken Harburg-Wien. Herr Zinkhan has entered, as a partner, the firm Johann Pacher's Nachfolger, Zinkhan & Hiebleitner, machinery and fine tools manufactory, Siebensterngasse, 30, Vienna.

#### GERMANY.

THE directors of Deutsche Gummi- und Guttaperchawaaren-Fabrik, vormals Volpi & Schlüter, Aktiengesellschaft (Berlin), are disposed to make a sale of the property and business. This is a long established factory, engaged in making technical (mechanical) rubber goods, to which boots and shoes were added in 1896.

### WIRELESS TELEGRAPHY ON THE AMAZON.

ON the steamer *Marenhense*, which sailed from New York on October 25 for the Amazon, was Mr. R. H. Mardock, *concessionaire* for wireless telegraphy on the Amazon, and secretary to the commission from the state of Amazonas at the St. Louis World's Fair. The concession referred to is to be exploited by the Amazon Wireless Telegraph and Telephone Co. [See THE INDIA RUBBER WORLD, October 1—page 28], which shipped by the same steamer the necessary material for the installation of two wireless telegraph stations in the state of Pará—at Pará and Ereves. The material for the other stations required to complete the service to Manaus will be forwarded in due course. A party of experts to install the service also sailed on the *Marenhense*.



## NEW TRADE PUBLICATIONS.

THE B. F. GOODRICH CO. (Akron, Ohio) have issued a new illustrated and priced catalogue of Mechanical Rubber Goods, which merits more than a mere formal mention. In the first place, it represents notably the advance in attractiveness which has been apparent of late in trade publications relating to the rubber industry, until now lists of such prosaic commodities as belting and hose are made as pleasing to the eye as any other trade announcements published. But it is progress of a different sort to which we desire to call attention more particularly.

This catalogue presents, in contrast, a view of the small building in which the Akron Rubber Works had its inception, in 1869, and one of the present Goodrich plant, covering 15 acres, which represents the result of their 35 years of business life. To a certain extent this comparison may be considered as typical of the growth of the rubber industry in America as a whole, though it is only fair to the company under review to recognize that their growth has been much beyond the average of the industry.

Coming now to the reading matter in this catalogue—and apart from the fuller details and better arrangement of matter relating to the leading staples than were formerly to be seen in a book of this class—its perusal is of no little interest on account of the number of items embraced which are comparatively new to the rubber trade, though already of great importance in the industrial world. Pneumatic tool hose, for example, is treated prominently, together with air drill hose, air brake hose, and a great number of other items that did not figure largely, if at all, in the mechanical rubber goods catalogues of a dozen years ago. The pictorial representation of the growth of the Goodrich rubber works is instructive, but it is not more striking than would be a comparison of the list of industrial applications of India-rubber in 1869 with those indicated in the latest Goodrich catalogue. [5¾" × 8½". 71 pages.]

THE B. F. GOODRICH CO. (7, Snow Hill, London, E. C.) issue "A Catalogue of India-Rubber Druggists' Sundries and Other Rubber Specialties," which is a very comprehensive and attractive presentation of their products in these lines, the book being well printed on good paper and profusely illustrated with excellently executed engravings. [5¾" × 8½".] 62 pages. —Prices are not given in the preceding catalogue, but these are supplied in an accompanying list of 22 pages, dated August 15, 1904.

NEW YORK BELTING AND PACKING CO., LIMITED, issue from their branch at No. 150 Lake street, Chicago, their "Fire Department Catalogue No. 12," which is an exceptionally full list of fire department supplies. It begins with a list of hose brands made at the factory of the Fabric Fire Hose Co. (Sandy Hook, Connecticut)—which is an affiliated company—followed by hose carts, reels, trucks, hand engines, and a long list of accessories, which serves better perhaps than any other catalogue yet issued to indicate the great variety of rubber factory products which enter into the equipment of a modern municipal fire service. The book is liberally illustrated, and prices are given of all the goods listed. [8¾" × 6¾". 190 pages.]

MORGAN & WRIGHT (Chicago) issue a brochure with the title "Book of Vehicle Tires," descriptive of their line of solid and cushion rubber tires, adapted to standard channels. The attention of dealers is directed to their tire stock on reels of 500 feet. The Morgan & Wright tire fitting machines are also described, in addition to which a number of tire sundries, especially for the repair shop, are listed. [6" × 9". 32 pages.] ——"Modern Horseshoeing," issued by the same firm, is a

treatise on the advantages of rubber pads for horseshoes, followed by a list of Morgan & Wright products in this line. [3¼" × 6". 20 pages.]

THE DIAMOND RUBBER CO. (Akron, Ohio) are issuing some distinctively original and attractive booklets, relative to their products, a recent specimen of which, entitled "The Delectable History of a Peaceful Servant," introduces the subject of Garden Hose in a style quite out of the ordinary. [3¼" × 6". 16 pages.]

NEPONSET RUBBER CO. (Hyde Park, Massachusetts) have issued their first catalogue, devoted to Mechanical Rubber Goods. The priced list relates to belting, hose, packing, gas-kets, matting, mats, springs, diaphragms, tubing, rubber carriage drill and duck, and molded sundries. [5" × 7½". 35 pages.]

BANNER RUBBER CO. (St. Louis) issue, as a souvenir of the St. Louis World's Fair, a brochure entitled "How Rubber Boots and Shoes are Made," giving the history of an article of rubber footwear in detail, from the extraction of the rubber in the forest. The text has been excellently prepared by Mr. W. E. Hemenover, secretary of the company. [3" × 6". 16 pages.]

ACTIENGESSELLSCHAFT METZLER & CO. (Munich, Germany) have issued Preis-Liste B No. 1, of surgical rubber articles and kindred goods, of their manufacture. It is a very complete publication, illustrated with several hundred cuts, and bound in boards. [7" × 9½". 180 pages.]

DAVID BRIDGE & CO. (Castleton Iron Works, Manchester, England) issue, as "An Addition to Our Catalogue," a series of half tone views of India-rubber washing machines, mixing machines, calenders, and vulcanizing presses, with shafting and gearing, of the latest types of their production. [9¼" × 6". 15 leaves.]

## ALSO RECEIVED.

REX Buggy Shield Co., Connersville, Indiana.=Vestibule Storm Shield. 6 pages.

Charles E. Miller, Nos. 97-101 Reade street, New York.=Automobile Catalogue, No. 6. [Automobile, motor boat, motor cycle, and bicycle parts and accessories.] 160 large pages; illustrated.

The Hartford Rubber Works Co., Hartford, Connecticut.=Hartford Solid and Cushion Tires. 15 pages.

The Diamond Rubber Co., Akron, Ohio.=Diamond [Tires] for 1905. 12 pages.

The Sweet Tire and Rubber Co., Batavia, New York.=Sweet Rubber Tire Applying Machine. 4 pages.

Voorhees Rubber Manufacturing Co., Jersey City, New Jersey.=Rubber Tires. 4 pages.

The Milwaukee Rubber Works Co., Cudahy, Wisconsin.=Solid and Cushion Tires. 11 pages.

Empire Rubber Manufacturing Co., Trenton, New Jersey.=The Auto Tire Protector. 4 pages.

Continental Caoutchouc Co., No. 298 Broadway, New York.=Automobile Accessories. 32 pages.

## COLOR BAROMETERS FOR ADVERTISING.

A VERY neat and attractive advertising novelty is the color barometer. One form of it, and a cheap and effective one, is a figure of a little maid on card board, with a real cloth skirt on. This skirt being chemically heated, changes color, for fair or for rainy weather, and also when a change (not of clothing, but of weather) is imminent. There are scores of figures, and hundreds of devices to which this idea lends itself. For an advertising novelty it beats the calendar out of sight. The Hohman & Maurer Manufacturing Co. (Rochester, New York), thermometer makers for the rubber trade, will tell any reader of this just what type of figure will fit their business.

## NEWS OF THE AMERICAN RUBBER TRADE.

## MECHANICAL RUBBER MANUFACTURERS' ASSOCIATION.

THE organization of the Mechanical Rubber Manufacturers' Association of the United States was completed at a meeting held at the Waldorf-Astoria, in New York, on Thursday, October 6, attended by representatives of a number of the leading factories, as follows:

Boston Belting Co.=Benjamin F. Elson.  
 Boston Woven Hose and Rubber Co.=Archibald M. Paul.  
 Crescent Belting and Packing Co.=John J. Voorhees.  
 The Diamond Rubber Co.=William B. Miller.  
 The Eureka Rubber Manufacturing Co.=J. A. Lambert.  
 The B. F. Goodrich Co.=Bertram G. Work.  
 Gutta Percha and Rubber Manufacturing Co.=Amadée Spadone.  
 Hamilton Rubber Manufacturing Co.=W. L. Blodgett.  
 Lake Shore Rubber Co.=Mr. Whitehead.  
 Manhattan Rubber Manufacturing Co.=Arthur F. Townsend.  
 Mechanical Rubber Co. (Chicago).=D. C. Blanchard.  
 Mechanical Rubber Co. (Cleveland).=M. I. Blanchard.  
 New York Belting and Packing Co.=James H. Cobb.  
 New York Rubber Co.=William H. Acken, Rufus A. Brown.  
 Peerless Rubber Manufacturing Co.=G. S. Taylor, W. J. Courtney.  
 Republic Rubber Co.=Warner Arms, L. J. Lomasney.  
 Revere Rubber Co.=E. S. Williams.  
 Rubber Goods Manufacturing Co.=Charles A. Hunter, Ernest Hopkinson.  
 Voorhees Rubber Manufacturing Co.=John J. Voorhees.  
 Whitehead Brothers Rubber Co.=Alfred Whitehead.

The meeting was called to order by Mr. Work, as chairman of the preliminary meeting reported in THE INDIA RUBBER WORLD, September 1, 1904 (page 428), and Mr. Hillman acted as secretary. The various committees named at the former meeting made their reports, which, after discussion and amendment, were adopted. The preamble to the Constitution states:

This association is formed for the purpose of fostering the interests of the manufacturers engaged in the manufacture and sale of mechanical rubber goods in the United States, reforming such abuses as exist, securing freedom from unjust and unlawful exactions; settling differences between the members of the association; and promoting a more enlarged and friendly intercourse between them.

There are to be two classes of members—active members, who must be manufacturers of mechanical rubber goods, and associate members, of whom each active member shall have the privilege of naming two, belonging to his own concern. The latter shall have the privilege of participating in discussions "but they shall have no vote other than the one vote that is invested in the active member." The officers shall be a president and vice president, and secretary and treasurer (the latter two positions being invested in one person), the same to be elected at the annual meeting on the first Thursday of October. Regular meetings shall be held on the first Thursday of October, December, February, April, and June, at times and places to be agreed upon hereafter. Special meetings may be called by the president at any time, and shall be called by him upon proper request. A majority of the active members shall constitute a quorum.

Three committees are provided for: An executive committee, and committees on grievances and specifications. Regarding the latter it is provided: "It shall be the duty of the specification committee to consider all specifications issued, pertaining to the manufacture of mechanical rubber goods, and to make such suggestions and recommendations as in their judgment seem best and to report at the regular meetings." The executive committee was elected by the association, and the other two appointed by the executive committee, it being provided that the president shall be a member *ex-officio* of all committees.

The result of the election of officers and appointment of committees is given below:

*President*—BETRAM G. WORK, Akron, Ohio.  
*Vice President*—AMADEE SPADONE, New York.  
*Secretary-Treasurer*—WILLIAM HILLMAN, New York.  
*Executive Committee*—E. S. Williams, Boston; Ernest Hopkinson, New York; W. B. Miller, Akron; C. Edward Murray, Trenton; M. I. Blanchard, Chicago.  
*Grievance Committee*—A. M. Paul, Boston; Warner Arms, Youngstown; J. Oliver Stokes, Trenton; John J. Voorhees, Jersey City; J. C. Butler, Chicago.  
*Specification Committee*—C. A. Hunter, New York; J. F. McGuire, Akron; Welling G. Sickel, Trenton; B. F. Elson, New York; D. C. Blanchard, Cleveland.

It was moved that the officers of the association serve without any remuneration, except the secretary-treasurer. After a very full and free discussion of the conditions of the industry, and its future prospects, the meeting adjourned at 3.40 P. M., without date.

## ANOTHER COMPANY TO MAKE TIRES.

THE Eureka Rubber Manufacturing Co. of Trenton, N. J. are installing an equipment of eleven specially constructed vehicle tire vulcanizers for the manufacture of solid and cushion carriage tires. These vulcanizers represent the most modernly effective ideas in the manufacture of this line and it is claimed should somewhat revolutionize present methods of manufacture. Tires can be produced in any lengths required up to 500 or 1000 feet, or longer. Nothing but fully guaranteed brands will be made and the company expect to add to their present enviable reputation among the carriage trade of the country as manufacturers of high grade rubber drills and duck, by turning out only thoroughly reliable and serviceable qualities in their rubber tire department. Mr. Frank Richardson, formerly president of the Sweet Tire and Rubber Co. (Batavia, New York) has been given entire charge of the tire department. His long connection with the carriage trade and extensive acquaintance with the rubber tire business, should insure the operation of this department under the most practical ideas possible. Mr. Richardson has not only been a successful rubber tire manufacturer, but previously was engaged in carriage manufacturing, so that he is more than well equipped to make a success of his new charge.

## THE GOODYEAR TIRE AND RUBBER CO. (AKRON).

THE plan of reorganization of this company, which has been mentioned from time to time in this Journal [See THE INDIA RUBBER WORLD, September 1, 1904—page 430] has been fully completed. It involved the taking up the company's entire note indebtedness, for which were substituted \$245,500 in first mortgage 10 year 6 per cent. bonds, against which, it is stated, the company have assets approximating \$800,000. At the annual meeting the officers were reelected as follows:

*President*—L. C. MILES.  
*Vice President*—Hon. CHARLES DICK.  
*Secretary*—CHARLES W. SEIBERLING.  
*Treasurer*—H. B. MANTON.  
*General Manager*—F. A. SEIBERLING.

The directorate is composed of the above, together with A. W. Firestone and F. G. Carnahan. The Messrs. Seiberling and Mr. Manton have filled their respective positions in the management since the organization of the company, in 1898. The Hon. Charles Dick is the junior United States senator for Ohio, having been chosen to succeed the late Hon. Mark Hanna in that office.



## THE DIAMOND RUBBER CO. BRANCHES.

O. J. WOODARD manager of the New York branch of the Diamond Rubber Co., has been promoted to the position of general selling representative, with headquarters in New York. Samuel F. Randolph, Jr., succeeds Mr. Woodard as manager of the New York branch, while retaining charge of the Philadelphia branch, where he has been manager since January, 1901. G. L. Bradley, who has been associated with Mr. Woodard in New York, now becomes manager of the Cleveland branch. A branch has been established at No. 3966 Olive street, St. Louis, in charge of R. L. McCrea, and another at No. 611 First avenue, south, Minneapolis, in charge of W. E. Roby.

## CONSOLIDATED RUBBER TIRE CO.

THIS is a New Jersey corporation, manufacturing the Kelly-Springfield solid vehicle tires. It has filed with the commissioner of corporations of Massachusetts, as required by law of foreign corporations doing business in that state, a statement of its condition, relating to March 1, 1904, the details of which follow, compared with the figures for the preceding year:

ASSETS.		Mar. 1, '04.	Jan. 1, '05.
Tools and fixtures.....	\$	8,495	7,556
Merchandise.....		231,710	238,650
Cash and debts receivable.....		259,142	271,196
Patent rights and share capital.....		5,027,878	5,029,805
Licenses, contracts, and good will.....		2,303,030	..
Miscellaneous.....		148,467	2,436,178
Profit and loss.....		5,024	62,535
Totals.....	\$	\$8,003,751	\$8,045,922
LIABILITIES.			
Capital stock.....	\$	\$5,149,000	\$5,149,000
Accounts payable.....		3,752	43,995
Debenture income bonds.....		2,850,500	2,850,500
Reserve.....		..	1,927
Totals.....	\$	\$8,003,751	\$8,045,922

## AFFAIRS OF GEORGE WATKINSON &amp; CO. (PHILADELPHIA).

RICHARD S. HUNTER, referee in the bankruptcy proceedings of George Watkinson & Co. (Philadelphia), declared a dividend of 8 per cent. in favor of the concern's creditors on October 12. It will be payable about November 1, and is the second dividend to be paid; the other, which was for 10 per cent., was paid in June last. The report of the trustee of the Watkinson estate, The Provident Life and Trust Company of Philadelphia, upon the strength of which the dividend was declared, showed the amount of cash in bank on October 10 to be \$151,817.67. From this amount was subtracted \$25,000, which is being retained for the payment of the Fargo claim and \$16,779.68, which represents the amount of the first dividend of 10 per cent. on the contested claims. This leaves a balance in actual cash of \$110,037.99. The total of the uncontested claims is \$864,501.24, on which 8 per cent. would amount to \$77,160.12. The amount of the contested claims is \$167,796.90, of which 8 per cent. amounts to \$13,423.75. This gives a total of \$90,583.87, which represents the entire second dividend. Under the heading "Unconverted Assets" there are accounts receivable to the value of \$23,000, all of which are contested claims. Then there is merchandise in the hands of H. Lane & Son amounting to \$16,000 and a claim against the United State Rubber Co. for \$15,200. It having appeared from the trustee's report of the cash in his hands that a dividend of 8 per cent will leave \$19,454.12 in the treasury, together with a sufficient sum to pay the previous and present dividends on all disputed claims, and, with certain assets not yet collected, Referee Hunter accordingly declared the 8 per cent. dividend, to be paid to the creditors from the funds of the estate.

## AKRON FACTORIES TO PAY MORE FOR WATER.

THE \$200,000 appropriation made by the Ohio legislature for improving the state canal, contingent upon the receipts of the canal reaching a certain figure, it now appears will soon become available. For instance, the Akron Water Works Co. have consented to pay \$6000 a year for water from Summit lake, instead of \$1500, as heretofore, and it is understood that The B. F. Goodrich Co. and The Diamond Rubber Co., among other large consumers of water at Akron, consent to an advance in rates, in view of the advantages expected from the contemplated improvements.

## THE RUBBER FOOTWEAR TRADE IN CANADA.

AT a combined meeting of the Rubber Shoe Manufacturers' and Rubber Boot and Shoe Jobbers' associations of Canada, at Toronto, on September 26, it was decided that wholesale firms handling less than \$15,000 worth of rubbers in a year shall not be eligible to the Jobbers' Association. Also, that after 1905 firms doing a combined retail and wholesale business must be recognized as retailers.—*The Canadian Shoe and Leather Journal* (Toronto) says that the past season was beyond all doubt the most successful in the history of the rubber shoe trade in the Dominion. The prolonged severe winter, with its abnormal snowfall, put the severest strain upon the capacity of production and distribution, and many dealers are asserted to have lost sales through inability to obtain supplies. The effect of these conditions has made itself felt upon the present season, and orders to date are far ahead in volume of anything in the history of the trade. The *Journal* mentions as a further reason for the satisfactory condition of trade the efforts of manufacturers and jobbers to bring about uniformity of selling methods and prices.

## RUBBER FOR CANADIAN GRAIN ELEVATORS.

THE Gutta Percha and Rubber Manufacturing Co. of Toronto, Limited, recently completed an order for the belting equipment for the grain elevator of the Canadian Northern railway, at Port Arthur, Ontario, which is stated to be the largest elevator in the world. The contract was for something over 3¼ miles of belting, mostly 30 and 36 inches wide, the total weight being more than 80,000 pounds. The capacity of the elevator is 7,000,000 bushels.—*THE INDIA RUBBER WORLD*, February 1, 1900 (page 137), mentioned a conveyor belt made by this company for the International railway government elevator at St. John, N. B., and which the company at that time believed to be the largest ever made. The company have since supplied the rubber equipment for a number of grain elevators in the Dominion, some of which are very extensive.

## PRESIDENT MINER'S COPPER INTERESTS.

MR. S. H. C. MINER, president of the Granby Rubber Co. (Granby, Quebec), has retired from the directorate of the Granby Consolidated Mining, Smelting, and Power Co., of which company he had been president since its inception, seven years ago. This is one of Canada's largest and most successful mining concerns, having \$13,363,030 of share capital issued, and producing lately more than 1,500,000 pounds of copper monthly. Control of the company has now passed to New York interests, who hold \$9,500,000 of the shares. The Montreal office will be closed, and the main office transferred to Grand Forks, British Columbia, with a branch in New York city. Mr. Miner presided at the annual meeting at Montreal on October 5. In announcing his retirement he expressed every confidence in the future of the company, saying that he was the largest individual shareholder, but he could not see his way clear to devoting so much time to the company's business as in the past. One of the New York directors stated that

those now in control had come up with the intention of re-electing Mr. Miner as president, and they deeply regretted his intention to retire.

#### NEW YORK STOCK EXCHANGE TRANSACTIONS.

##### UNITED STATES RUBBER CO.:

DATES.	COMMON.			PREFERRED.		
	Sales.	High.	Low.	Sales.	High.	Low.
Week ending Sep. 24	2,040	20	19 <sup>5</sup> / <sub>8</sub>	960	74 <sup>3</sup> / <sub>4</sub>	73 <sup>1</sup> / <sub>2</sub>
Week ending Oct. 1	8,285	23 <sup>1</sup> / <sub>4</sub>	19 <sup>7</sup> / <sub>8</sub>	3,870	79 <sup>1</sup> / <sub>2</sub>	74 <sup>3</sup> / <sub>4</sub>
Week ending Oct. 8	12,980	24 <sup>1</sup> / <sub>4</sub>	23	4,400	80 <sup>1</sup> / <sub>8</sub>	78 <sup>3</sup> / <sub>4</sub>
Week ending Oct. 15	30,365	30 <sup>1</sup> / <sub>4</sub>	23 <sup>1</sup> / <sub>2</sub>	10,543	85 <sup>1</sup> / <sub>4</sub>	80 <sup>1</sup> / <sub>4</sub>
Week ending Oct. 22	12,120	30	27 <sup>1</sup> / <sub>2</sub>	2,100	85	82

##### RUBBER Goods Manufacturing Co.:

DATES.	COMMON.			PREFERRED.		
	Sales.	High.	Low.	Sales.	High.	Low.
Week ending Sep. 24	1,830	19 <sup>1</sup> / <sub>4</sub>	19	35	82 <sup>3</sup> / <sub>8</sub>	82 <sup>3</sup> / <sub>8</sub>
Week ending Oct. 1	18,590	22 <sup>1</sup> / <sub>4</sub>	19 <sup>1</sup> / <sub>8</sub>	1,180	84	81 <sup>3</sup> / <sub>4</sub>
Week ending Oct. 8	2,930	21 <sup>7</sup> / <sub>8</sub>	20	63	84 <sup>1</sup> / <sub>2</sub>	83
Week ending Oct. 15	26,570	24 <sup>5</sup> / <sub>8</sub>	20 <sup>1</sup> / <sub>2</sub>	1,030	88 <sup>3</sup> / <sub>4</sub>	83 <sup>1</sup> / <sub>2</sub>
Week ending Oct. 22	8,520	24	22	1,035	86 <sup>1</sup> / <sub>2</sub>	85

##### THE NEW FISK RUBBER CO.

[See THE INDIA RUBBER WORLD, September 1, 1904, page 10.]

A NEW corporation has been formed, under the laws of Massachusetts, with a capital of \$600,000, under the name of The Fisk Rubber Co., to succeed the Fisk Rubber Co., manufacturers of tires at Chicopee Falls, which has been in the hands of a receiver since October, 1903. Harry T. Dunn, general manager of the old company, is president; Alfred N. Mayo, the assignee and largest creditor, is treasurer; and Harry G. Fisk, president of the old company, clerk of the new corporation. These also form the board of directors. The capital is divided into an equal number of shares of preferred and common stock. Shareholders of the old company receive for each share, one share each of preferred and common stock in the new corporation. The creditors receive 5 per cent. in cash and 100 per cent. in new preferred stock, except that all claims less than \$100 are paid in cash. It is intended to retire \$50,000 par value of the preferred stock annually, though any part of it may be retired at any time at par and 6 per cent. interest. Preferred shareholders are entitled to 6 per cent. dividends, payable semi-annually. During the whole time that the concern has been in the hands of a receiver the business has been on a good scale, and now that ample capital is assured the new company feel that the prospects are good for the future. Already extensive additions have been made to the manufacturing plant, which it is expected will double its capacity. A new building is under way, four stories, brick, 120 × 50 feet, beside an addition to the boiler house, 25 × 35 feet, to accommodate two extra boilers. It is anticipated that the additions will be completed, equipped, and fully running by January 1. The company announce that the management will be practically the same as in the past, and the line of manufacture will remain unchanged—pneumatic bicycle, carriage, and automobile tires.

##### PHILADELPHIA RUBBER WORKS TO BUILD.

THE Philadelphia Rubber Works have awarded a contract for extensive building operations at Schoolkill avenue and Reed street, Philadelphia—a site recently purchased from the bankrupt Watkinson company for more than \$100,000—which will represent a total expenditure of upward of \$250,000. The present building on the grounds, which was long used by the Watkinson company for the manufacture of rubber shoes and

boots, is a two-story affair, 120 × 150 feet. This is to be entirely remodeled on modern lines, and equipped with up-to-date machinery. In addition, a boiler house will be constructed of fireproofing material, which will be 29 × 86 feet. In this building will be installed boilers capable of generating 1500 HP. There are also to be erected an engine and pump house 48 × 56 feet, a mill 60 × 120 feet, and devulcanizing building 49 × 58 feet. Both the mill and the building to be used for devulcanizing purposes will each be three stories in height. The girders will be of slow burning mill construction, and will be put through a special fireproofing test before being installed. Brick tower fire escapes will be features of each of the buildings, and in addition automatic sprinklers will be installed on all floors. William Steele & Sons have the contract and work is to begin at once.

##### THE DIAMOND RUBBER CO. (AKRON, OHIO).

AT the annual meeting of this company, on October 11, the reports presented indicated that a good year's business had been done. The board of directors elected consists of F. A. Hardy, A. H. Marks, W. B. Miller, A. H. Noah, Ohio C. Barber, J. K. Robinson, and R. C. Lake. Mr. Lake, who is a resident of Chicago, is the only new member of the board, having been chosen to succeed Walter B. Hardy, now residing in London. The officers were re-elected, as follows:

*President*—F. A. HARDY.

*Vice President and Superintendent*—A. H. MARKS.

*Secretary*—W. B. MILLER.

*Treasurer*—A. H. NOAH.

On October 24 work was commenced on an important addition to the company's office building. It is to be a brick structure, two stories high, and about 50 × 80 feet, adjoining the present offices on Falor street.

##### UNITED STATES RUBBER CO.—DIVIDEND.

THE directors, at a meeting in New York on October 6, declared a dividend of 1½ per cent. on the preferred shares of the company, from the net earnings of the fiscal year beginning April 1, 1904, payable December 15 to shareholders of record November 30. The amount to be disbursed is \$352,882.50. This is the second 1½ per cent. dividend declared out of this year's earnings, and the third declared since the resumption of dividends, last spring. A statement given out by the company is that the net earnings for the first half of the fiscal year (those for September being partially estimated) were \$2,055,941.43, leaving a surplus, after paying the two dividends, of \$1,350,176.43. Last year the net earnings for the first six months were stated at \$884,011.—It is reported that plans have been completed for retiring \$2,000,000 of the funding 5 per cent. notes of the United States Rubber Co., due March 15 next, and the extension of the remaining \$8,000,000 of the issue of March, 1902, for 3½ years.—The General Rubber Co., incorporated in New Jersey March 24, 1904, to engage in trading in crude rubber, and which is controlled by the United States Rubber Co., has been actively establishing connections with primary markets. Its formation has been part of the plan of the manufacturing company for the more direct buying of its raw materials. The board of directors of the General Rubber Co., the capital of which is \$2,000,000, is now as follows: Samuel P. Colt (president), Lester Leland (vice president), John J. Watson (treasurer), Andrew H. Brown (assistant treasurer), William M. Ivins, E. C. Benedict, James P. Deshler, Walter S. Ballou, and James B. Ford.—The yacht *Virginia* has been chartered by a party who will sail from New York about the middle of November and proceed up the Amazon as far as Manáos. The party will be headed by Mr. E. C. Benedict, who is a director in the United States Rubber and General Rubber



companies, and it is understood that the trip bears a relation to the extension of their trade in crude rubber. Mr. Benedict informed THE INDIA RUBBER WORLD that it had not been fully decided who would compose the party.

#### MORE COMMERCIAL PACIFIC CABLE CAPITAL.

THE stockholders of the Commercial Cable Co. were notified on October 5 that \$1,000,000 unissued capital of the company would be offered to them. The money will be used to complete the Commercial Pacific cable between Manila and Shanghai. Application was made recently to the New York Stock Exchange to list the securities of the Mackay companies.

#### NEW INCORPORATIONS.

THE Fisk Rubber Co. (Chicopee Falls, Mass.), September 30, 1904; under Massachusetts laws; capital authorized, \$600,000. Incorporators: Alfred N. Mayo, Harry G. Fisk, and Harry T. Dunn—all of Springfield, Mass. Further details are given in another column.

=A certificate purporting to incorporate, under the laws of the District of Columbia, the Catasaqua Rubber Co., was filed in the office of the recorder of deeds at Washington, July 21, 1904, the capital stock being stated therein to be \$500,000, divided into an equal number of preferred and common shares, of the par value of \$10. Local newspapers report the purchase by Philadelphia parties, from the receiver of the Wolfe-Engbert Composite Metal Co., of their large plant at East Catasaqua, Pennsylvania, the same to be used for the manufacture of rubber tires, carriage cloth, and waterproof clothing. The officers of the rubber company are stated to be: James Regnery, Easton, Pa., president; William MacDonald, Allentown, Pa., vice president; the Hon. Hugh E. Crilly, Allentown, secretary and treasurer; J. W. Kenevel, Philadelphia, superintendent.

=The Brantford Felt and Rubber Co., Limited, announced in the *Ontario Gazette*, October 8, 1904; capital, \$100,000. Provisional directors: John F. Martin, John Percival Bell, Frederick W. Frank, Joseph Henry Hum, and Robert E. Ryerson. The object is to manufacture rubber and felt footwear. Brantford is well adapted for manufacturing purposes, and is located in Ontario, westward from the port of Hamilton.

#### TRADE NEWS NOTES.

THE Milford Rubber Co. (Milford, Massachusetts) have received and are installing the calender which was mentioned in THE INDIA RUBBER WORLD for July—the latest Birmingham make, three roll, 60" X 22". They are now in a position to handle all kinds of heavy and light drills and sheetings, and will make a specialty of bellows and melodeon cloths.

=The Republic Rubber Co. (Youngstown, Ohio), have recently opened in Cincinnati a branch house to handle exclusively their product in solid rubber carriage tires. It will be in charge of Melville Ritchie, who is well known to the carriage trade throughout the West. The store is located at No. 856 West Sixth street, where will be carried a large stock of tires to supply the trade in Cincinnati and adjacent territory.

=The Eureka Fire Hose Co. (New York) desire to have published a denial of a rumor relative to a change in the agency of the company at Chicago. They announce that "Messrs. W. H. Salisbury & Co. who have handled the product of the Eureka Fire Hose Co. for so many years with marked success, will continue to be their only representatives at Chicago, and it is hoped, will remain indefinitely in control."

=Bowers Rubber Co. (San Francisco) have been awarded a contract for supplying the city of Fresno, California, with 2000 feet of 2½ inch rubber lined cotton fire hose, for which bids were opened on September 19.

=The Gorham Rubber Co. (San Francisco) have installed at

their Los Angeles branch—No. 326 Main street—a complete vulcanizing plant for repair work on automobile tires, involving the latest improvements in this line. The Gorham company are Pacific coast managers for The B. F. Goodrich Co., and carry a stock of the latter's tires.

=The factory of the Goodyear Rubber Co. at Middletown, Connecticut, has been running overtime of late, and it is reported that at no past date has there been so much business in hand as now.

=James F. Grady, of New Haven, Connecticut, for some years past connected with the Edward Malley Co., of that city, will go to Chicago as manager of the Seamless Rubber Co.'s branch there.

=Mr. Samuel H. Cable has accepted a position with the Neponset Rubber Co. (Hyde Park, Massachusetts) and will have charge of the manufacture of carriage cloth bearing the "Cable" brand.

=The local newspapers report that times were never before so good as at present at the Woonsocket and Millville factories of the Woonsocket Rubber Co. There are 1400 employes at work at the former and 800 at the latter plant.

=George H. Edwards has resigned as superintendant of the insulated wire department of the National India Rubber Co. (Bristol, Rhode Island), to accept a position with Ostby & Barton, jewelers, of Providence.

=Edward Z. Jefferson—No. 7 Wood street, Pittsburgh, Pennsylvania—announces to the trade that he has become connected with the Quaker City Rubber Co. (Philadelphia), as manager of their Railroad department.

=Suit for \$10,000 damages has been brought against the Western Rubber Co. (Goshen, Indiana) by Harvey Stork, a former employe, for injuries to both hands sustained while at work in the company's factory.

=Basil S. Courtney, general sales manager, at No. 1679 Broadway, New York, for the tires of The Fawkes Rubber Co. (Denver, Colorado), has taken, in addition, the agency for the tire and mechanical goods products of The Milwaukee Rubber Works Co. (Cudahy, Wisconsin). The latter company are now manufacturing the Fawkes tires.

=The report printed in this department in the last issue of THE INDIA RUBBER WORLD, to the effect that W. H. Salisbury & Co. (Chicago) had taken on the account of the Pennsylvania Rubber Co., though reaching us through a supposedly reliable source, proves to have been incorrect, and its publication is regretted.

=The Independent Rubber Co., No. 129 East Columbia street, Fort Wayne, Indiana, wholesalers of rubber boots and shoes, carry exclusively the Hood Rubber Co.'s brands. A force of ten is employed in the house, together with an equal number of travelers in Indiana, Ohio, and Michigan. The business has been established three years and is owned by Isidor Lehman and Sol Karn—two energetic young men, supplied with ample capital.

=Mr. W. C. Coleman, of W. C. Coleman Co. (Setauket, Long Island) spent the first part of the month at the World's Fair, at St. Louis. While the company were damaged by the recent fire at Setauket, no interruption to business will result. Some of their machinery was destroyed, but the stock of scrap rubber happened to be stored in a warehouse isolated from the factory plant—one of the few structures on the ground not burned.

=The first snowfall of the season in northern New York—reported from Albany, Schenectady, Glens Falls, Saratoga, and Catskill, on October 12—occurred earlier than usual, which is an encouraging indication for the rubber shoe trade.

=A. W. Brunn (Nos. 2-4 Stone street, New York), formerly representative of the late firm of Kramrisch & Co. (Liverpool), has been appointed exclusive selling agent for the United States and Canada by Fred. Stern & Co. (Liverpool), importers of crude rubber, making a specialty of African grades, and V. Chautard & Christensen (London), importers of and dealers in crude rubber of all grades.

=There was filed with the secretary of state of Connecticut, on October 20, a certificate of the final dissolution of the Rubber Manufacturers' Selling Co., of Colchester. This company was organized in 1889 by George Watkinson, in connection with the Colchester Rubber Co., and incorporated in 1891, with \$300,000 capital. It was transferred to the United States Rubber Co. in August, 1893, with the Colchester company.

=C. E. W. Woodward, who has been assistant superintendent at the factory of The Fisk Rubber Co. (Chicopee Falls, Massachusetts) since its beginning, has resigned to engage in other business, and will be succeeded by G. H. T. Babbitt.

=In *re* Victor Rubber Co. (Springfield, Ohio)—the old company by that name—Frank Krupp, referee in bankruptcy, has made a report to the United States court, to the effect that no fraud is shown in the conduct of the company prior to its insolvency, as charged. The charge was made by the Erie Railroad Co., which delivered \$10,000 worth of crude rubber to the company's factory, consigned by a New York house, "C. O. D." The delivery, by some means, was completed without payment being made, and the railroad became responsible for the rubber. The rubber company claimed to have received the rubber in good faith, not knowing that it was a "C. O. D." shipment. It was in regard to this matter that the decision by Referee Krupp was asked. The railroad company's claim will not have preference over those of other creditors. The railroad company has appealed from this decision.

=The Monarch Rubber Co. (Brockton, Massachusetts) has been succeeded by the Brockton Rubber Co. which includes most of the former stockholders and several new ones, and the plant is being put into shape for operation at an early date.

=Suit has been filed in the Akron (Ohio) court of common pleas by several banks, to have set aside certain conveyances of property made by George W. Crouse, prior to his being declared a bankrupt some time ago, it being alleged that the same were made with intent to defraud his creditors. The property so conveyed includes shares in a number of corporations, including The B. F. Goodrich Co.

=The city of Winnipeg, Manitoba, was visited on the night of October 11 by the most disastrous fire in its history, resulting in the destruction of an important business section. In answer to an inquiry, THE INDIA RUBBER WORLD is informed that The Winnipeg Rubber Co., Limited, did not suffer in any way. Their premises were two or three blocks from the area of the fire, which, fortunately, was checked before reaching the rubber store.

=The plant formerly operated by the Standard Rubber Co. (Campello, Massachusetts) is reported to have been purchased by Rufus C. Maltby, of New York, together with the land occupied by it, but it is not stated what the objects of the purchaser may be.

=The Rubber Workers' Union at Trenton, New Jersey, recently adopted resolutions asking all union men to use their influence and votes against Edward C. Stokes, the Republican candidate for governor at the forthcoming. Mr. Stokes was formerly treasurer of the United and Globe Rubber Manufacturing Cos., of Trenton. The rubber workers claim that he resigned because he did not care to become involved in the strike in the rubber factories last winter, which was lost by the

union. The resolution of the Rubber Workers' Union was later affirmed by the Central Labor Union of Trenton.

=The United States Agency Michelin Tire Co. (New York) has been notified of the award, at the St. Louis World's Fair, of a grand prize for its display of Michelin pneumatic tires.

=The Singer Manufacturing Co. (New York) made 292 distinct entries of their sewing machines, in 14 groups of exhibits, at the St. Louis World's Fair. The international jury gave them seven grand prizes, one of them being for machines for stitching rubber, leather and canvas belting, shown in Group 35.

=The Eureka Fire Hose Co. (New York) have been advised that their "Eureka," "Paragon," and "Red Cross" brands of seamless rubber lined fire hose have been awarded a gold medal at the St. Louis World Fair.

#### PERSONAL MENTION.

MR. ADOLPH PRINZHORN, director of the Continental Caoutchouc- und Guttapercha-Compagnie (Hanover, Germany), was in attendance at the St. Louis World's Fair, and favored THE INDIA RUBBER WORLD office with a visit while in the States.

=Dr. Alberto Pirelli, of the important rubber and cable firm of Pirelli & Co. (Milan, Italy), whose presence in the United States was mentioned lately in THE INDIA RUBBER WORLD, on leaving the country took a steamer for Manáos, with a view to seeing the rubber business on the Amazon at close range before returning to his home. The Messrs. Pirelli have imported direct from Brazil a good deal of the rubber used by them lately.

=Prior to the republican state convention in Rhode Island on October 12, in view of a widely expressed intention to nominate for the office of governor Colonel Samuel P. Colt, president of the United States Rubber Co., that gentleman published a letter of considerable length, stating his entire confidence that the party would win the forthcoming election, but that his obligations of a business nature were such that he could not feel justified in neglecting them to accept a public office.

One of the nominees of the convention was Mr. Walter A. Read, a director of the Woonsocket Rubber Co., who is named for reelection for general treasurer.

=Señor Don Cayetano Romero, who has been appointed Mexican consul general at New York, after having filled a similar position at San Francisco, is a brother of the late Matias Romero, who died while Mexican ambassador at Washington, and whose interest in rubber culture in Mexico undoubtedly did much to encourage investments in that field.

=Memorial services for the late Hon. Elisha S. Converse were held on the evening of October 27, by Converse lodge of Masons, of Boston, which was named in honor of Mr. Converse.

=Mr. Lester Leland, treasurer of the Boston Rubber Shoe Co., with Mrs. Leland, has planned a trip to the Mediterranean and the Nile, sailing from New York about November 8.

=Mr. Frank Poel, of Poel & Arnold (New York), who has been in Europe for the last three or four months, is due to arrive at home at about the date of the publication of this issue.

=Mr. William Symington, of the crude rubber firm of Alden, Symington & Co., London and Liverpool, was a recent visitor to the States.

=Mr. William F. Bowers, president of the Bowers Rubber Co. (San Francisco) has been spending a few weeks in the Atlantic states, including a visit to his native city, Lynn, Massachusetts.

=Mr. Harold Waldo French, of Akron, Ohio, was married on October 17, to Miss Margaret Emerson, daughter of Mr. and Mrs. Samuel Gaunett, of Milton, Massachusetts. Mr. French is the representative at Akron of George A. Alden & Co., in the crude rubber trade.



=General S. Duncan Oliphant, clerk of the United States circuit court at Trenton, New Jersey, died October 23, in his eighty-first year. He was the father of the late Alexander C. Oliphant, who, at his death in 1902, was treasurer of The United and Globe Rubber Manufacturing Cos. (Trenton) and adjutant general for New Jersey.

=Mr. D. Lorne McGibbon, general manager of the Canadian Rubber Co. of Montreal, was among recent visitors to the office of THE INDIA RUBBER WORLD.

=Barton Parker, until recently advertising manager of the Hartford Rubber Works Co., has accepted a similar position with the Olds Motor Works (Detroit, Michigan).

=Mrs. Amelia Godfrey, widow of James W. Godfrey, who was sales manager for The India Rubber and Gutta Percha Insulating Co. (New York) at the time of his accidental death, in November, 1901, has obtained a verdict for \$30,000 in a suit against the City of New York, having proved that her husband's death was due to negligence with respect to the condition of the street through which he was driving when the accident occurred.

#### A TRIBUTE TO THE LATE MR. ALDEN.

At a meeting of the Rubber Sundries Manufacturers' Association held in New York, October 13, 1904, the following resolution was unanimously passed:

*Resolved*, that in the death of George A. Alden, Esq., the President of the Seamless Rubber Co. (New Haven, Conn.), this Association desires to express its sympathy with the Seamless Rubber Co., in their great loss, and,

*Resolved*, that this resolution be spread upon the minutes of this meeting and a copy of the same be sent to the officers of the Seamless Rubber Co.

Rhodes Lockwood and F. H. Jones, members of the Association, were appointed a committee to attend the funeral of Mr. Alden.

#### SMOKING RUBBER IN AFRICA.

TO THE EDITOR OF THE INDIA RUBBER WORLD: Mr. A. D. Thornton, of the Canadian Rubber Co. of Montreal, in his letter published in your issue of October 1 (page 3) opens a very interesting question about the coagulation of latex in Africa. His letter ends by the phrase: "It would seem that if a good red Upper Congo milk is cured in the same way as Pará, better results would be obtained."

Of the numerous attempts in the Congo to coagulate *Landolphia* vine latex by the Pará smoking process, I don't know one which has proved successful. In almost every district trials have been made, not only with *Landolphia* vine, but also with the "Ireh" and the *Kickxia* tree latex, and always without any practical result, as the stuff obtained had no elasticity.

Some time ago I had to report on Gold Coast rubber which had been coagulated by the Pará smoking process; the stuff had a splendid appearance, having the color and even the smell of fine Pará, but as far as elasticity was concerned it was absolutely worthless, and was not much better than Accra or Grand Bassam paste. This rubber had been obtained from the *Fun-tumia elastica* tree.

It is a curious fact to observe that as far as Africa is concerned the smoking process has been a failure on account of the lack of elasticity. Of course many kinds of African rubbers are smoked, but this is to help the drying, the smoking taking place after the latex has been coagulated.

G. VAN DEN KERCKHOVE.

Brussels, October 10, 1904.

A CLEAN COURT ROOM.—The new rubber tile floor in the large Criminal Court room has been attracting much attention. It has been found to be even better than a good substitute for carpet and enables the employes of the building to keep the room cleaner than any of the other courts.—*Pittsburgh Press*.

### REVIEW OF THE CRUDE RUBBER MARKET.

THE advance in Pará sorts to be recorded at this time represents a recovery of practically 50 per cent. of the net decline which occurred during September, as reported in our last issue. The advance in Africans and Centrals, while less marked, is substantial. The market for all sorts shows a condition of firmness at this time, which is strengthened to a degree by the statistical position, arrivals at Pará up to date being hardly up to the average. The Amazon river output (including Caucho) at last advices, compares with the same months of previous years as follows:

	1901	1902	1903	1904
July.....	1260	1290	1280	1240
August.....	1290	1370	1230	1250
September.....	1940	1670	2010	1810
October.....	2640	2280	2440	a 2460
Total, four months.....	7130	6610	6960	6760

[a To October 8, 1904.]

Imports into the United States continue on a large scale. Official statements for the nine months ending September '30 for three years past are as follows:

	1902	1903	1904
Pounds.....	37,010,560	42,807,008	41,553,345
Import Value.....	\$18,118,144	\$26,387,722	\$30,864,340

The condition of the industry is not all that could be desired, the factories in some branches running light. Others, however, report a normal amount of business, and the footwear manufacturers are working to their full capacity. In another

column is a review of the cotton goods market, the condition of which has an important bearing upon the rubber industry.

The reports of the English market, on another page, are to be supplemented by later advices, to the effect that prices are slightly higher, with supplies very light, and the condition of the market firm.

Following is a statement of prices of Pará grades, one year ago, one month ago, and on October 31—the current date.

PARÁ.	Nov. 1, '03.	Oct. 1, '04.	Oct. 31.
Islands, fine, new.....	97@ 98	108@ 109	112@ 113
Islands, fine, old.....	@	none here	none here
Upriver, fine, new.....	102@ 103	110@ 112	115@ 116
Upriver, fine, old.....	104@ 105	112@ 114	none here
Islands, coarse, new.....	57@ 58	60@ 62	64@ 65
Islands, coarse, old.....	@	none here	none here
Upriver, coarse, new.....	82@ 83	86@ 87	88@ 89
Upriver, coarse, old.....	@	none here	none here
Caucho (Peruvian) sheet.....	63@ 64	67@ 68	67@ 68
Caucho (Peruvian) ball.....	72@ 73	76@ 77	77@ 78

The market for other sorts in New York, showing a general advance, is as follows:

AFRICAN.		CENTRALS.	
Sierra Leone, 1st quality	92 @ 93	Esmeralda, sausage...	78 @ 79
Massai, red.....	92 @ 93	Guayaquil, strip.....	67 @ 68
Benguella.....	70 @ 71	Nicaragua, scrap...	75 @ 76
Cameroon ball.....	63 @ 64	Panama, slab.....	59 @ 60
Accra flake.....	34 @ 35	Mexican, scrap.....	74 @ 75
Lopori ball, prime.....	93 @ 94	Mexican, slab.....	59 @ 60
Lopori strip, prime.....	87 @ 88	Mangabeira, sheet.....	47 @ 56
Ikelemba.....	94 @ 95	EAST INDIAN.	
Madagascar, pinky....	82 @ 83	Assam.....	89 @ 90
		Borneo.....	@

## Late Pará cables quote:

	Per Kilo.		Per Kilo.
Islands, fine. ....	6\$800	Upriver, fine.....	8\$000
Islands, coarse.....	6\$400	Upriver, coarse.....	5\$700

Exchange, 12 $\frac{1}{2}$ d.

## Last Manáos advices:

Upriver, fine.....	7\$800	Upriver, coarse. ....	5\$300
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Exchange, 12 $\frac{1}{2}$ d.

## NEW YORK RUBBER PRICES FOR SEPTEMBER (NEW RUBBER).

	1904.	1903.	1902.
Upriver, fine.....	1.09@1.21	1.00@1.10	74 @78
Upriver, coarse.....	85(a) 91	79@ 91	59 @62
Islands, fine.....	1.07@1.16	97@1.08	71 @75
Islands, coarse.....	59(a) 67	60(a) 70	46 @48
Cametá, coarse.....	60@ 66	61(a) 68	47 @50

In regard to the financial situation, Albert B. Beers (broker in India-rubber, No. 68 William street, New York), advises us:

"During October the money market has continued about the same as at the end of September, being fairly firm with 5 @ 6 $\frac{1}{2}$  per cent. ruling for the various grades of rubber notes."

## Statistics of Para Rubber (Excluding Caucho).

NEW YORK.				
	Fine and Medium.	Coarse.	Total 1904.	Total 1903.
Stocks, August 31.....tons	85	8 =	93	168
Arrivals, September.....	427	264 =	691	954
Aggregating.....	512	272 =	784	1122
Deliveries, September.....	474	266 =	740	1025
Stocks, September 30..	38	6 =	44	97

PARÁ.			ENGLAND.		
1904.	1903.	1902.	1904.	1903.	1902.
Stocks, August 31.....tons	360	120	260	650	1525
Arrivals, September... 1741	1980	1640	593	590	719
Aggregating.....	2101	2100	1737	793	1240
Deliveries, September. 1728	1860	1651	575	1000	969
Stocks, Sept. 30.. 373	240	86	218	240	1275

	1904.	1903.	1902.
World's visible supply, September 30.....tons	1463	1719	2595
Para receipts, July 1 to September 30.....	3951	4500	3962
Para receipts of Caucho, same dates.....	349	415	368
Afloat from Pará to United States, Sept. 30..	303	492	420
Afloat from Pará to Europe, September 30...	525	650	616

## Ceylon Rubber.

EXPORTS OF cultivated rubber, mostly Pará variety, from Ceylon, from January 1 to September 26, 1904:

	pounds
To Great Britain.....	40,610
" Germany.....	6,006
" Australia.....	332
" Belgium.....	111
" United States.....	63
" Holland.....	15
" Other Countries. ....	179
Total, nine months.....	47,316
Total, same months of 1903.....	29,601

## Rubber Scrap Prices.

NEW YORK quotations—prices paid by consumers for car-load lots, in cents per pound—show a slight advance in respect to old boots and shoes:

Old Rubber Boots and Shoes—Domestic.....	5 $\frac{1}{2}$ @ 5 $\frac{3}{4}$
Do —Foreign.....	5 @ 5 $\frac{1}{2}$
Pneumatic Bicycle Tires.....	3 $\frac{1}{2}$ @ 4
Solid Rubber Wagon and Carriage Tires.....	6
White Trimmed Rubber.....	81 $\frac{1}{2}$ @ 83 $\frac{1}{4}$
Heavy Black Rubber.....	4
Air Brake Hose.....	21 $\frac{1}{4}$ @ 23 $\frac{1}{8}$
Fire and Large Hose.....	13 $\frac{1}{2}$ @ 17 $\frac{1}{8}$
Garden Hose.....	13 $\frac{1}{2}$ @ 17 $\frac{1}{8}$
Matting.....	3 $\frac{1}{4}$ @ 1

## Bordeaux.

IMPORTS OF RUBBER—JANUARY TO SEPTEMBER.

	kilos	
January.....	66,864	54,550
February.....	95,007	169,025
March.....	119,582	94,715
April.....	97,641	121,560
May.....	104,008	91,125
June.....	63,473	65,060
July.....	50,215	72,220
August.....	151,110	208,185
September.....	103,450	87,400

Total..... 851,440 963,740

## Antwerp.

TO THE EDITOR OF THE INDIA RUBBER WORLD: In the sale by inscription which took place on the 14 instant, 412 tons were offered, of which 378 tons were sold at somewhat irregular prices, showing however on the average, an advance on valuations of 1 to 2 per cent. Since then 39 tons have been taken out of the market, among which we may mention 15 tons Upper Congo Lac Leopold II.

The next large sale by inscription in which about 330 tons will be offered, takes place on November 11. The steamer *Leopoldville* has just arrived from the Congo, with about 359 tons.

C. SCHMID &amp; CO., SUCCESEURS.

Antwerp, October 15, 1904.

## ANTWERP RUBBER STATISTICS FOR SEPTEMBER.

DETAILS.	1904.	1903.	1902.	1901.	1900.
Stocks, Aug 30.....kilos	602,495	319,986	756,401	684,355	1,056,124
Arrivals in Sept....	772,200	455,762	470,084	887,256	417,050
Congo sorts.....	13,327	442,435	429,855	71,000	2,232
Other sorts.....	139,907	13,327	40,229	15,896	81
Aggregating....	1,374,695	775,748	1,226,485	1,571,611	1,473,174
Sales in September..	570,213	353,890	769,774	675,468	468,412
Stocks, Sept. 30...	804,482	421,858	456,711	896,143	1,004,762
Arrivals since Jan. 1	4,481,821	3,782,156	4,028,920	4,726,126	4,584,468
Congo sorts.....	3,701,549	3,413,793	3,725,404	4,382,856	3,866,145
Other sorts.....	780,272	368,393	303,516	343,270	718
Sales since Jan. 1...	4,288,239	4,018,403	3,986,918	4,443,932	3,871,697

## RUBBER ARRIVALS AT ANTWERP.

SEPT. 27.—By the *Anversville*, from the Congo:

Bunge & Co.....(Société Générale Africaine) kilos	140,000
Do.....(Société Anversoise)	51,000
Do.....(Sultanats du Haut Obangi)	12,000
Société A B I R.....	23,000
Société Equatoriale Congolaise.(Société L'Ikelemba)	4,000
Comptoir des Produits Coloniaux.(Cie. de la N'Goko)	2,500
Do.....(Ekala Kadei Sangha)	25,000
Do.....(Caoutchouc Renard)	1,000
Charles Dethier.....(Société Belgika)	1,000
M. S. Cols.....(Mr. D'Heygere)	1,000
Société Coloniale Anversoise.....(La Lulonga)	12,000
L. & W. Van de Velde.....(Cie. du Kasai)	80,000
Edmond Van Steensel.....	
.....(Cie. Bruxelloise du Haut Congo)	6,000
Société Coloniale Anversoise.(Belge du Haut Congo)	4,000
Do.....(Cie. de Lomami)	19,000
Do.....(Süd Kamerun)	4,000

## SPECIAL NOTICES.

GERMAN TECHNICAL ENGINEER, University education, special knowledge of chemistry, for years Manager on the Continent of Soft and Hard India-rubber Works, Asbestos Works, and Cable Telegraph Works, desires a similar position. Specially expert mixer of all kinds of India-rubber compounds and insulation compounds. Address GERMAN RUBBER, care of THE INDIA RUBBER WORLD. [668]

SUPERINTENDENT.—Wanted a strictly first-class Superintendent for Druggists' Sundries Department in a large factory; one thoroughly familiar with compounds and making up. Must be capable of taking full charge of manufacturing end of business. Write fully, giving experience, references, etc. Address D. S., care of THE INDIA RUBBER WORLD. [669]



OCT. 18.—By the *Leopoldville*, from the Congo:

Bunge & Co..... (Société Générale Africaine) kilos	167,000
Do..... (Société Anversoise)	21,000
Do..... (Sultanats du Haut Obanghi)	18,000
Do..... (Société Isango)	4,000
Do..... (Chemins de fer Grand Lacs)	4,000
Do..... (Cie. du Kasai)	56,000
Do..... (Société "La Kotto")	2,000
Société A B I R.....	21,000
Société Coloniale Anversoise. (Belge du Haut Congo)	6,000
Do..... (Cie. de Lomami)	11,000
Charles Dethier..... (La Haut Sangha)	9,000
Do..... (La M' Poko)	10,000
G. & C. Krelinger..... (La Lobay)	2,000
Société Générale de Commerce..... (Alimaïenne)	6,000
Comptoir Commercial Congolais.....	21,000
Divers.....	1,000 359,000

MONS. A. SCHEIBLER, manager of the Crude Rubber department of the Company for General Trade, Limited (Antwerp), has been traveling in the United States of late, studying the conditions of the rubber industry there. The importance of the consumption in America of Congo rubbers renders of special interest to the Antwerp houses the development of the industry on the western side of the Atlantic.

### London.

EDWARD TILL & Co. [October 1] report stocks:

	1904.	1903.	1902.
LONDON { Pará sorts..... tons	—	—	—
{ Borneo.....	52	14	128
{ Assam and Rangoon.....	4	5	12
{ Other sorts.....	488	178	361
Total.....	544	197	501
LIVERPOOL { Pará.....	220	243	1273
{ Caucho.....	212	31	111
{ Other sorts.....	690	395	579
Total, United Kingdom.....	1666	866	2464
Total, September 1.....	1508	1364	2731
Total, August 1.....	1764	1781	3053
Total, July 1.....	1920	2285	3595
Total, June 1.....	1667	2248	3687

### PRICES PAID DURING SEPTEMBER.

	1904.	1903.	1902.
Pará fine, hard..	4/ 8½ @ 4/ 11½	4/ 2 @ 4/ 5¼	3/ 1½ @ 3/ 4
Do soft.....	4/ 8½ @ 4/ 11	4/ 2 @ 4/ 7¾	
Negroheads, scrappy.	3/ 7½ @ 3/ 10	3/ 3½ @ 3/ 8½	2/ 7
Do Cameté.....	2/ 7½ @ 2/ 9	2/ 10¼	2/
Bolivian.....	4/ 9 @ 5/ 0½		
Caucho ball.....	3/ 2½ @ 3/ 5½	3/ 3½ @ 3/ 7½	2/ 5 @ 2/ 6
Do slab.....	2/ 0½ @ 2/ 10	2/ 7½ @ 2/ 10½	2/ 1½ @ 2/ 2½
Do tails.....	No sales	3/ 1 @ 3/ 1½	No sales

HECHT, LEVIS & KAHN, London and Liverpool, report [September 30]:

Mr. Felix Dorn, who has been connected with our firm during the last 17 years, having received a very favorable offer from friends in another trade, we feel that we ought not to stand in his way, and have therefore reluctantly agreed to terminate his engagement from this date. Consequently from to-day Mr. Dorn ceases to represent or sign our firm. Our best wishes accompany Mr. Dorn in his future career.

Mr. Dorn is a native of Saxony; after gaining a business experience in Berlin, he became identified with the British woolen trade; in 1887 he entered the Liverpool office of Hecht, Levis & Kahn, where, for a number of years, he has been joint representative of the firm.

OCTOBER 14.—The market for Pará sorts has been firm and dearer,

### PARA RUBBER VIA EUROPE.

	POUNDS.
SEPT. 26.—By the <i>Umbria</i> =Liverpool:	
A. T. Morse & Co. (Coarse).....	22,500
Wallace L. Gough (Coarse).....	2,500 25,000
SEPT. 28.—By the <i>Venezia</i> =Colon:	
Chicago Bolivian Rubber Co. (Fine).....	23,000
OCT. 1.—By the <i>Chaparral</i> =Liverpool:	
A. T. Morse & Co. (Coarse).....	16,000
Poe & Arnold (Coarse).....	3,000 19,000
OCT. 1.—By the <i>Cedric</i> =Liverpool:	
A. T. Morse & Co. (Coarse).....	11,500
OCT. 1.—By the <i>Oceanic</i> =Liverpool:	
Poe & Arnold—(Medium).....	53,000
OCT. 1.—By the <i>Lucania</i> =Liverpool:	
Poe & Arnold (Fine).....	8,500

but on the spot there has been little fine hard, and only small sales have been made up to 4s. 10½d. November deliveries sold at 4s. 8d. @ 4s. 9d.; December at 4s. 7d. @ 4s. 7¼d.; January at 4s. 6d., and buyers. Bolivian firmly held; fine quoted at 4s. 11d. Mollendo: Small sales of fine on the spot at 4s. 8½d. down to 4s. 7d. for delivery, and Beni Bolivian at 4s. 9d. afloat. Medium grades in to-day's auctions were in small supply, which met a fair demand for the better qualities at steady prices.

*Plantation Rubber*.—Eight cases Straits offered and sold, fine biscuits at 5s. 4d. @ 5s. 4½d., thick ditto rather immature at 5s. Two cases fine Ceylon biscuits sold at 5s. 4d.

*Balata*.—One hundred and sixty-four packages offered and 20 sold; Sheet mixed Pile 1 and 2 at 1s. 8d. @ 1s. 9d. Pile 2 part very thick at 1s. 3d., and Block at 9d.

### Rubber Receipts at Manaos.

DURING September and three months of the crop season for three years [courtesy of Messrs. Witt & Co.]:

FROM —	SEPTEMBER.			JULY-SEPTEMBER.		
	1904.	1903.	1902.	1904.	1903.	1902.
Rio Purús—Acre. . . . . tons	403	429	271	909	886	768
Rio Madeira. . . . .	193	263	188	672	755	735
Rio Juruá. . . . .	190	254	227	215	256	230
Rio Javary—Iquitos. . . . .	68	71	55	281	185	155
Rio Solimões. . . . .	32	59	114	42	84	163
Rio Negro. . . . .	3	—	44	3	15	65
Total. . . . .	889	1076	899	2122	2181	2116
Caucho. . . . .	40	133	43	218	341	259
Total. . . . .	929	1209	942	2340	2522	2375

### IMPORTS FROM PARA AT NEW YORK.

[The Figures Indicate Weights in Pounds.]

October 4.—By the steamer *Dunstan*, from Manáos and Pará:

IMPORTERS.	Fine.	Medium.	Coarse.	Caucho.	Total.
Poe & Arnold.....	68,200	42,100	66,400	1,300=	178,000
General Rubber Co.....	90,100	15,100	43,500	—=	148,700
New York Commercial Co.	71,000	20,100	38,000	500=	129,600
A. T. Morse & Co.....	7,400	—	115,000	4,500=	126,900
Edmund Reeks & Co....	14,700	5,000	3,300	—=	23,000
Hagemeyer & Brunn....	11,400	1,700	2,700	—=	15,800
Lionel Hagenaers & Co..	6,800	—	1,800	—=	8,600
G. Amsinck & Co. ....	300	300	—	—=	1,100
Total .....	269,900	84,800	270,700	6,300=	631,700

October 14.—By the steamer *Maranhense*, from Manáos and Pará:

New York Commercial Co.	82,700	50,000	40,300	3,000=	176,000
General Rubber Co....	83,400	21,700	54,700	1,200=	161,000
A. T. Morse & Co.....	17,100	5,700	106,400	—=	129,200
Poe & Arnold.....	11,200	300	94,000	4,300=	109,800
Hagemeyer & Brunn....	4,700	—	1,600	—=	6,300
Lionel Hagenaers & Co..	5,100	—	900	—=	6,000
Total .....	204,200	77,700	297,900	8,500=	588,300

October 27.—By the steamer *Gregory*, from Manáos and Pará:

Poe & Arnold .....	211,200	38,400	117,300	300=	367,200
A. T. Morse & Co.....	179,600	31,100	61,600	700=	273,000
General Rubber Co....	132,800	28,800	74,000	5,100=	240,700
New York Commercial Co.	90,400	20,600	51,500	2,100=	164,600
Hagemeyer & Brunn....	19,100	5,700	7,200	—=	32,000
Lionel Hagenaers & Co..	14,100	—	1,300	—=	15,400
Edmund Reeks & Co....	7,800	1,800	3,700	—=	13,300
Total.....	655,000	126,400	316,600	8,200=	1,106,200

[NOTE.—The steamer *F. A. Gier*, from Pará, is due at New York on November 2, with 300 tons Rubber.]

OCT. 24.—By the *Umbria*=Liverpool:

George A. Alden & Co. (Fine).....	45,000
Poe & Arnold (Fine).....	4,500 49,500

### OTHER ARRIVALS IN NEW YORK CENTRALS.

	POUNDS
SEPT. 26.—By the <i>Roman Prince</i> =Bahia:	
J. H. Rosbach & Bros.....	23,000
Hirsch & Katser.....	14,500 37,500

## CENTRALS—Continued.

SEPT. 26. By the *Celtic*=Liverpool:  
Wallace L. Gough ..... 6,000

SEPT. 26.—By the *Vigilante*=Mexico:  
Harburger & Stack ..... 2,500  
E. Steiger & Co. .... 500  
H. Marquardt & Co. .... 600  
L. N. Chemadit & Co. .... 400  
E. N. Tibbals & Co. .... 200 4,200

SEPT. 26.—By the *Probus*=New Orleans:  
Manhattan Rubber Mfg. Co. .... 1,000  
A. N. Rotholz ..... 1,600 2,000

SEPT. 28.—By the *Yucatan*=Colon:  
Hirzel, Feltman & Co. .... 14,700  
J. A. Medina & Co. .... 8,600  
Lawrence Johnson & Co. .... 7,000  
G. Amsinck & Co. .... 5,300  
Dumarest Bros. & Co. .... 5,600  
George A. Alden & Co. .... 3,300  
A. Santos & Co. .... 3,400  
Roland & Van Stekile ..... 2,800  
A. M. Capens Sons ..... 2,600  
Isaac Brandon & Bros. .... 1,800  
E. B. Strout ..... 1,700  
Meyer & Hecht ..... 1,200  
Silva, Bussenius & Co. .... 700  
Graham, Hinkley & Co. .... 600  
A. Held ..... 600  
Eggers & Heinlein ..... 400  
Harburger & Stack ..... 500  
R. G. Barthold ..... 400  
American Trading Co. .... 400  
A. Rosenthal & Sons ..... 200  
DeSola, Lobo & Co. .... 200 62,200

SEPT. 30.—By the *Carpathia*=Liverpool:  
Hirsch & Kaiser ..... 16,000

OCT. 1.—By the *El Monte*=New Orleans:  
A. T. Morse & Co. .... 5,500  
A. N. Rotholz ..... 1,000  
Eggers & Heinlein ..... 1,000 7,500

OCT. 5.—By the *Sibaria*=Cartagena, etc.:  
Isaac Kuble & Co. .... 4,500  
A. T. Hanneburg ..... 3,000  
G. Amsinck & Co. .... 1,500  
Pedro A. Lopez ..... 1,000  
Cadenas & Co. .... 1,000  
Graham, Hinkley & Co. .... 600  
Kunhardt & Co. .... 400 12,000

OCT. 8.—By the *Monterey*=Mexico:  
Fred Probst & Co. .... 1,000  
H. Marquardt & Co. .... 800  
E. Steiger & Co. .... 400  
E. N. Tibbals & Co. .... 300  
Graham, Hinkley & Co. .... 300 2,800

OCT. 10.—By the *Altai*=Greytown:  
E. B. Strout ..... 8,000  
G. Amsinck & Co. .... 6,000  
Livingstone & Co. .... 2,800  
Andreas & Co. .... 1,000  
American Trading Co. .... 600  
D. A. De Lima & Co. .... 600  
A. D. Straus & Co. .... 500  
M. C. A. Delgado ..... 500  
Graham, Hinkley & Co. .... 500 20,500

OCT. 12.—By the *Financ*=Colon:  
J. A. Medina & Co. .... 4,200  
G. Amsinck & Co. .... 3,000  
Lawrence Johnson & Co. .... 2,200  
Eggers & Heinlein ..... 2,000  
Isaac Brandon & Bros. .... 1,900  
Silva, Bussenius & Co. .... 900  
Piza Nephews & Co. .... 800  
R. G. Barthold ..... 400 15,400

OCT. 12.—By the *Oceanic*=Liverpool:  
G. Amsinck & Co. .... 4,500  
Wallace L. Gough ..... 4,500 9,000

OCT. 14.—By the *El Valle*=New Orleans:  
A. T. Morse & Co. .... 4,500  
Eggers & Heinlein ..... 2,000  
A. N. Rotholz ..... 1,500  
Manhattan Rubber Mfg. Co. .... 1,000  
G. Amsinck & Co. .... 1,000 10,000

OCT. 15.—By the *Thespis*=Bahia, etc.:  
J. H. Rossbach & Bros. .... 33,500  
Hirsch & Kaiser ..... 12,500  
Lawrence Johnson & Co. .... 4,500 50,500

OCT. 18.—By the *Comus*=New Orleans:  
A. T. Morse & Co. .... 7,000  
A. N. Rotholz ..... 1,000 8,000

OCT. 15.—By the *Lucania*=Liverpool:  
Geo. A. Alden & Co. .... 13,500

OCT. 20.—By the *Soldier Prince*=Bahia:  
J. H. Rossbach & Bros. .... 27,000  
Hirsch & Kaiser ..... 16,000  
Emile Boris ..... 3,000 46,000

## CENTRALS—Continued.

OCT. 16.—By the *Advance*=Colon:  
Hirzel, Feltman & Co. .... 2,500  
Lawrence Johnson & Co. .... 1,900  
Silva, Bussenius & Co. .... 1,800  
Graham, Hinkley & Co. .... 1,500  
Pedro A. Lopez ..... 800  
Smithers, Nordenholt & Co. .... 800  
G. Amsinck & Co. .... 600  
W. Loalza & Co. .... 600  
John Boyd, Jr., & Co. .... 500  
Isaac Brandon & Bros. .... 500  
Eggers & Heinlein ..... 400 11,900

OCT. 22.—By the *Vigilante*=Mexico:  
E. Steiger & Co. .... 700  
H. Marquardt & Co. .... 500  
L. N. Chemadit & Co. .... 200  
E. N. Tibbals & Co. .... 300  
For Hamburg, etc. .... 4,000 6,000

OCT. 24.—By the *Byron*=Bahia:  
J. H. Rossbach & Bros. .... 25,000  
Hirsch & Kaiser ..... 16,000  
A. D. Hitch & Co. .... 3,500  
Lawrence Johnson & Co. .... 1,500 46,000

## AFRICANS.

SEPT. 23.—By the *Phoenix*=Hamburg:  
A. T. Morse & Co. .... 38,000  
George A. Alden & Co. .... 7,000 45,000

SEPT. 26.—By the *Umbria*=Liverpool:  
A. T. Morse & Co. .... 6,500  
George A. Alden & Co. .... 5,000 11,500

SEPT. 26.—By the *Celtic*=Liverpool:  
Poel & Arnold ..... 18,000

SEPT. 29.—By the *Pretoria*=Hamburg:  
A. T. Morse & Co. .... 30,000

SEPT. 29.—By the *Baltic*=Liverpool:  
A. T. Morse & Co. .... 11,000  
Poel & Arnold ..... 5,000  
Windmuller & Reolker ..... 2,000 18,000

OCT. 4.—By the *Botic*=Liverpool:  
General Rubber Co. .... 78,000

OCT. 4.—By the *Zeeland*=Antwerp:  
A. T. Morse & Co. .... 13,500  
Rubber Trading Co. .... 6,000 19,500

OCT. 6.—By the *Graf Waldersee*=Hamburg:  
George A. Alden & Co. .... 26,000  
Poel & Arnold ..... 3,500 29,500

OCT. 6.—By the *Majestic*=Liverpool:  
A. T. Morse & Co. .... 3,000  
Rubber Trading Co. .... 2,000  
Henry A. Gould Co. .... 2,500 7,500

OCT. 10.—By the *Cedric*=Liverpool:  
Wallace L. Gough ..... 11,500  
Poel & Arnold ..... 2,000 13,500

OCT. 8.—By the *Etruria*=Liverpool:  
General Rubber Co. .... 34,000  
George A. Alden & Co. .... 8,000 42,000

OCT. 11.—By the *Finland*=Antwerp:  
George A. Alden & Co. .... 290,000  
Joseph Cantor ..... 43,000  
Rubber Trading Co. .... 4,500 337,500

OCT. 12.—By the *Oceanic*=Liverpool:  
A. T. Morse & Co. .... 13,000

OCT. 15.—By the *Lucania*=Liverpool:  
George A. Alden & Co. .... 85,000  
Wallace L. Gough ..... 13,500 98,500

OCT. 17.—By the *Arabic*=Liverpool:  
General Rubber Co. .... 22,500  
Wallace L. Gough ..... 20,000  
Henry A. Gould Co. .... 13,500 56,000

OCT. 18.—By the *Noordam*=Rotterdam:  
George A. Alden & Co. .... 22,500

OCT. 20.—By the *Botanic*=Liverpool:  
A. T. Morse & Co. .... 22,500  
Rubber Trading Co. .... 11,500 34,000

OCT. 20.—By the *Pennsylvania*=Hamburg:  
Poel & Arnold ..... 70,000  
George A. Alden & Co. .... 18,000  
Rubber Trading Co. .... 6,000  
A. T. Morse & Co. .... 5,000 96,000

OCT. 24.—By the *Umbria*=Liverpool:  
George A. Alden & Co. .... 45,000  
A. T. Morse & Co. .... 27,000 72,000

OCT. 24.—By the *Celtic*=Liverpool:  
Poel & Arnold ..... 4,500  
Wallace L. Gough ..... 2,500  
Windmuller & Reolker ..... 3,500 11,500

## EAST INDIAN.

OCT. 7.—By the *Tioga*=Calcutta:  
Poel & Arnold ..... 3,500

OCT. 11.—By the *St. Fillans*=Singapore:  
Winter & Smilie ..... 22,000  
Poel & Arnold ..... 15,000  
Robert Branss & Co. .... 25,000  
Pierre T. Betts ..... 25,000 90,000

OCT. 11.—By the *Germanie*=London:  
Poel & Arnold ..... 20,000  
Wallace L. Gough ..... 2,000 22,000

OCT. 13.—By the *Bedouin*=Singapore:  
Winter & Smilie ..... 15,000  
Pierre T. Betts ..... 10,000 25,000

OCT. 17.—By the *Minnetonka*=London:  
Poel & Arnold ..... 15,000

OCT. 24.—By the *St. Paul*=London:  
Poel & Arnold ..... 22,500

## GUTTA-JELUTONG.

OCT. 11.—By the *St. Fillans*=Singapore:  
George A. Alden & Co. .... 315,000  
Poel & Arnold ..... 105,000  
Robert Branss & Co. .... 50,000  
D. A. Shaw & Co. .... 30,000 500,000

OCT. 13.—By the *Bedouin*=Singapore:  
George A. Alden & Co. .... 250,000  
Robert Branss & Co. .... 45,000 295,000

## GUTTA-PERCHA AND BALATA.

SEPT. 23.—By the *Phoenix*=Hamburg:  
To Order ..... 6,000

SEPT. 26.—By the *Pretoria*=Hamburg:  
To Order ..... 16,000

OCT. 10.—By the *Hamburg*=Hamburg:  
R. F. Downing & Co. .... 2,500

OCT. 15.—By the *Lucania*=Liverpool:  
Earle Brothers ..... 2,500  
Windmuller & Reolker ..... 2,000 4,500

OCT. 20.—By the *Pennsylvania*=Hamburg:  
To Order ..... 7,500

## BALATA.

SEPT. 26.—By the *Mimehaha*=London:  
Earle Brothers ..... 2,500

SEPT. 29.—By the *Procidia*=Demerara, etc.:  
Middleton & Co. .... 13,500  
Arkell & Douglass ..... 2,000  
Frame & Co. .... 2,000 18,000

OCT. 1.—By the *Philadelphia*=London:  
Earle Brothers ..... 4,500

OCT. 7.—By the *Alliance*=La Guayra, etc.:  
American Trading Co. .... 2,500  
Middleton & Co. .... 1,000  
Frame & Co. .... 1,500 5,000

OCT. 24.—By the *Fontabelle*=Demerara:  
Leaycraft & Co. .... 3,500  
Middleton & Co. .... 3,000 6,500

## CUSTOM HOUSE STATISTICS.

## PORT OF NEW YORK—SEPTEMBER.

Imports:	POUNDS.	VALUE.
India-rubber.....	2,782,624	\$1,947,641
Gutta-percha.....	44,409	21,556
Gutta-jelutong (Pontianak) ..	1,446,065	44,554
Total.....	4,273,098	\$2,013,751

Exports:	POUNDS.	VALUE.
India-rubber.....	39,668	\$30,613
Reclaimed rubber.....	313,496	30,740
Rubber Scrap Imported.....	42,522	\$1,448

## BOSTON ARRIVALS.

	POUNDS.
SEPT. 7.—By the <i>Leucostictus</i> =London: George A. Alden & Co.—East Indian.....	16,631
SEPT. 10.—By the <i>Saxonia</i> =Liverpool: George A. Alden & Co.—African.....	11,200
SEPT. 13.—By the <i>Winifredian</i> =Liverpool:	



George A. Alden & Co.—African...	1,287	SEPT. 26.—By the <i>Columbian</i> —London:		GUTTA-PERCHA.	
SEPT. 2.—By the <i>Anglia</i> —London:		George A. Alden & Co.—East Indian.	13,308	SEPT. 2.—By the <i>Seneca</i> —Singapore:	
George A. Alden & Co.—East Indian.	5,195	SEPT. 28.—By the <i>Cretic</i> —Liverpool:		Winter & Smillie—Jelutong (Pontianak)	112,227
SEPT. 2.—By the <i>Columbian</i> —London:		C. M. Hawthaway & Sons—African...	568	SEPT. 2.—By the <i>Seneca</i> —Singapore:	
George A. Alden & Co.—African...	582			Winter & Smillie—Gutta-percha....	11,170
SEPT. 4.—By the <i>Trenia</i> —Liverpool:		Total.....	60,772	Total .....	123,397
George A. Alden & Co.—Central .....	12,001	[Value, \$10,117.]		[Value, \$4,266.]	

## SEPTEMBER EXPORTS OF INDIA-RUBBER FROM PARA (KILOGRAMS).

EXPORTERS.	UNITED STATES.					EUROPE.					TOTAL
	FINE.	MEDIUM.	COARSE.	CAUCHO.	TOTAL.	FINE.	MEDIUM.	COARSE.	CAUCHO.	TOTAL.	
Adelbert H. Alden.....	71,020	15,400	78,870	900	166,280	86,850	14,190	10,900	3,600	115,540	281,820
Frank da Costa & Co.....	1,754	147	118,866	—	120,767	67,032	6,764	23,384	7,950	105,130	225,897
Cmok, Schrader & Co.....	21,080	5,270	52,400	—	78,750	61,540	5,950	22,460	450	90,400	169,150
Neale & Staats.....	—	—	36,972	—	36,972	53,098	6,878	2,844	—	62,820	99,792
J. Marques & Co.....	17,033	—	7,579	—	24,612	35,379	1,173	7,665	—	44,217	68,829
Singlehurst Brocklehurst & Co.	—	—	2,225	—	2,225	8,566	933	1,914	1,804	13,217	15,442
R. Suarez & Co.....	—	—	—	—	—	8,179	4,105	2,341	—	14,625	14,625
Pires, Teixeira & Co.....	9,993	—	2,607	—	12,600	—	—	—	—	—	12,600
Direct from Manáos.....	315,467	72,926	59,344	7,405	455,142	264,228	40,301	40,183	44,163	388,875	844,017
Total .....	430,347	93,833	358,863	8,305	897,348	584,872	80,294	111,691	57,967	834,824	1,732,172
Total January-June .....	4,868,612	1,038,149	2,720,135	1,036,078	8,873,879	4,803,518	589,529	1,328,363	2,282,155	9,003,565	17,877,444
	4,195,045	1,131,774	2,401,598	1,111,084	9,513,068	3,353,916	732,916	1,408,662	1,980,886	7,476,380	16,989,448

## INDIA-RUBBER EXPORTS FROM THE AMAZON RIVER, 1903-04 (POUNDS).

INCLUDING direct shipments from Iquitos (Peru) and Serpa (state of Amazonas), and rubber in transit from Bolivia (registered at Manáos), compiled from figures furnished to the British Board of Trade, by the British consul at Pará:

SOURCES.	UNITED STATES.					EUROPE.					TOTAL.
	FINE.	MEDIUM.	COARSE.	CAUCHO.	TOTAL.	FINE.	MEDIUM.	COARSE.	CAUCHO.	TOTAL.	
From Manáos.....	11,601,533	2,493,882	2,662,628	2,506,640	19,264,683	8,016,227	1,226,118	1,767,201	3,671,822	14,681,368	33,946,051
From Pará.....	4,661,075	858,039	8,299,503	144,205	13,962,822	8,845,101	957,852	3,737,495	1,408,973	14,949,481	28,912,303
From Iquitos.....	6,611	395	2,315	16,283	25,604	1,370,621	222,157	549,510	2,277,977	4,420,265	4,445,869
From Serpa.....	—	—	—	—	—	8,356	—	2,520	—	10,876	10,876
Total.....	16,269,219	3,352,316	10,964,446	2,667,128	33,253,109	18,240,365	2,406,127	6,056,726	7,358,772	34,061,990	67,315,099

EXPORTS for 1902-03: To United States, 32,112,116 pounds; to Europe, 33,643,937 pounds; total, 65,756,053 pounds.

## OFFICIAL STATISTICS OF CRUDE INDIA-RUBBER (POUNDS).

UNITED STATES.				GREAT BRITAIN.			
MONTHS.	IMPORTS.	EXPORTS.	NET IMPORTS.	MONTHS.	IMPORTS.	EXPORTS.	NET IMPORTS.
August, 1904.....	3,941,141	241,004	3,700,047	August, 1904.....	3,306,800	2,687,776	619,024
January-July.....	37,689,032	1,979,724	35,709,308	January-July.....	34,992,048	19,453,286	15,538,762
Eight months, 1904.....	41,630,173	2,220,818	39,409,355	Eight months, 1904.....	38,298,848	22,141,062	16,157,786
Eight months, 1903.....	38,655,119	1,984,816	36,670,303	Eight months, 1903.....	35,090,272	25,428,032	9,662,240
Eight months, 1902.....	33,754,566	2,300,776	31,453,730	Eight months, 1902.....	31,948,784	20,225,968	11,722,816

GERMANY.				ITALY.			
MONTHS.	IMPORTS.	EXPORTS.	NET IMPORTS.	MONTHS.	IMPORTS.	EXPORTS.	NET IMPORTS.
August, 1904.....	2,933,920	738,980	2,194,940	August, 1904.....	150,700	1,980	148,720
January-July.....	20,821,680	5,848,700	14,972,980	January-July.....	901,120	73,480	827,640
Eight months, 1904.....	23,755,600	6,587,680	17,167,920	Eight months, 1904.....	1,051,820	75,460	976,360
Eight months, 1903.....	23,468,040	7,768,420	15,700,520	Eight months, 1903.....	1,075,800	100,760	975,040
Eight months, 1902.....	22,307,780	8,774,460	13,533,520	Eight months, 1902.....	964,260	81,620	882,640

FRANCE.*				AUSTRIA-HUNGARY.			
MONTHS.	IMPORTS.	EXPORTS.	NET IMPORTS.	MONTHS.	IMPORTS.	EXPORTS.	NET IMPORTS.
August, 1904.....	1,174,140	429,000	1,131,240	August, 1904.....	174,460	440	174,020
January-July.....	12,802,680	7,387,260	5,414,420	January-July.....	1,757,140	14,740	1,742,400
Eight months, 1904.....	13,976,820	7,431,160	6,545,660	Eight months, 1904.....	1,931,600	15,180	1,916,420
Eight months, 1903.....	10,738,420	6,118,220	4,620,220	Eight months, 1903.....	1,984,400	17,160	1,967,240
Eight months, 1902.....	11,578,160	5,625,840	5,952,320	Eight months, 1902.....	1,742,840	11,000	1,731,840

NOTE.—German statistics include Gutta-percha, Balata, old rubber, and substitutes. French, Austrian, and Italian figures include Gutta-percha. The exports from the United States embrace the supplies for Canada consumption.

\* General Commerce.

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ROBERT B. BAIRD, VICE PRESIDENT

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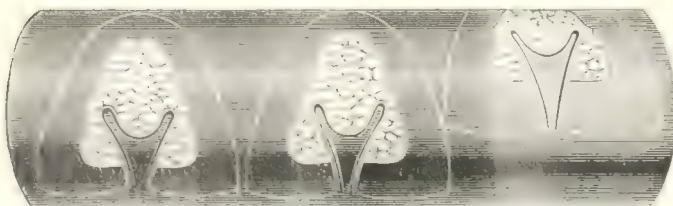
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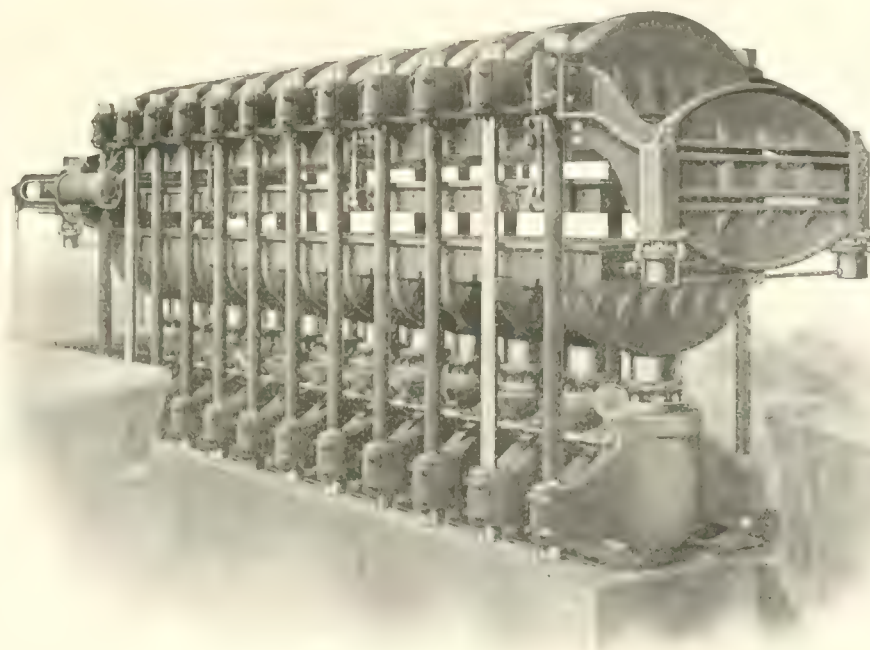
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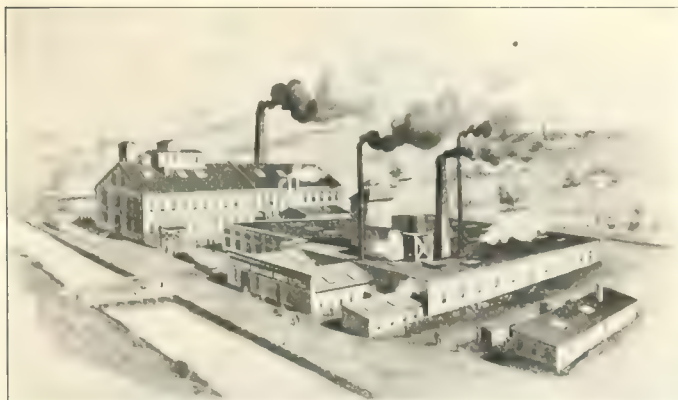
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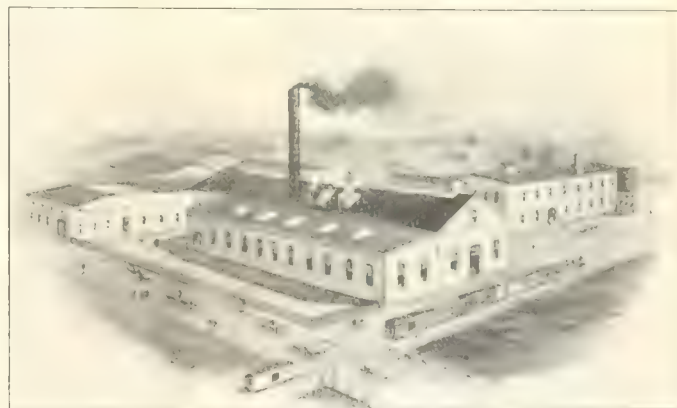
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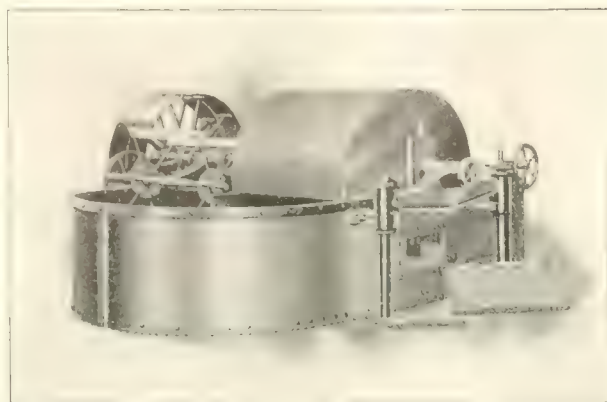
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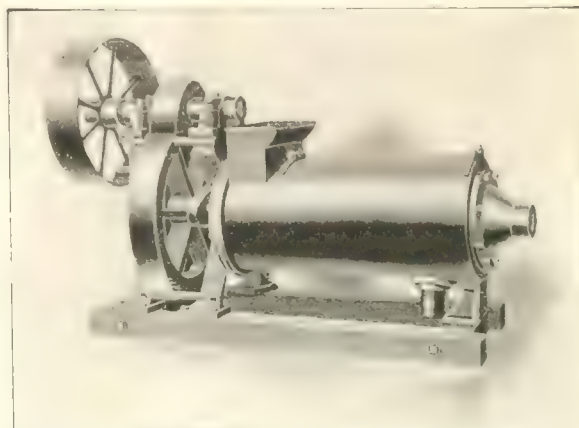
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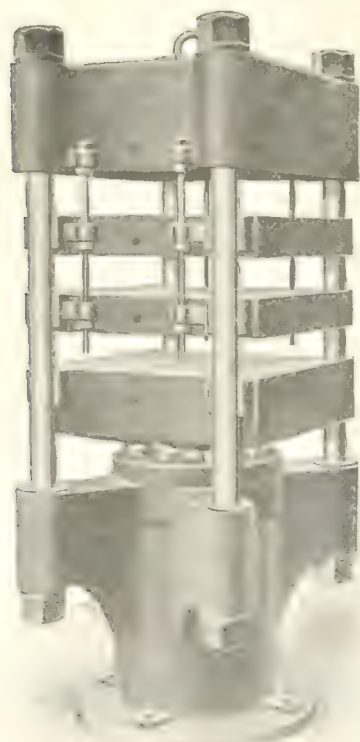
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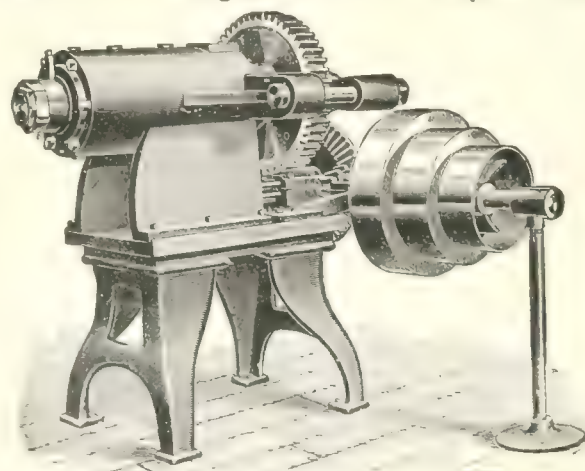
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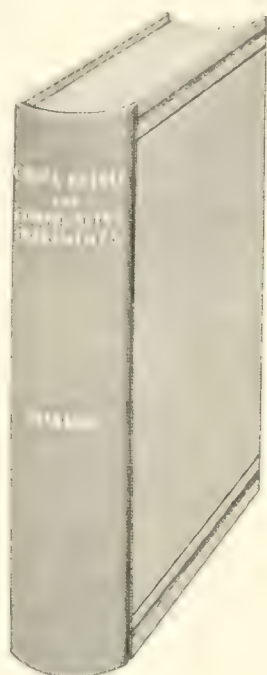
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For further particulars send to the office of THE INDIA RUBBER WORLD, where pamphlets descriptive of the property may be seen.

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PAYING SIX PER CENT. INTEREST  
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OF WHITE WOOD, BASS, OAK, ASH, &c  
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FOR

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They are installed in all of the principal rubber  
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# Publishers' Page **INDIA RUBBER WORLD**

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## Better Than Laboratory Experiments.

MR. HENRY C. PEARSON, Editor THE INDIA RUBBER WORLD, New York.—*Dear Mr. Pearson:*—In my capacity as Chemist for the—Rubber Manufacturing Co., I have occasion at different times to use your book "Crude Rubber and Compounding Ingredients," as a reference, and I find that the information it contains is taken from actual experience with large rubber manufacturers, which information is more valuable than it is possible to get in laboratory experiments. I keep your book at hand for such reference. Very sincerely yours,

AUGUST 2, 1904.

Chemist,

## A Rubber Man's Library.

THE record formed by the set of fifteen bound volumes comprising the issues of this Journal since 1889 is unquestionably the fullest and most complete history of the India-rubber and allied trades, not only within the period named, but in the past, since many articles have been published in relation to the beginnings of the rubber interest. This set of volumes, therefore, is essentially a rubber man's library of the highest value.

## Bound Volumes.

THE number of INDIA RUBBER WORLD subscribers who regularly have the issues bound up for permanent reference becomes greater every year, and, if desired, orders for such binding will be received at this office. The publishers also carry in stock yearly volumes, neatly and durably bound, up to and including the publication year ending September 1, 1904, which volumes will be sent prepaid to any address at \$5 each.

## "Crude Rubber and Compounding Ingredients."

THE manager of an important rubber factory says: "I use this book almost every day in my factory, and frequently many times a day. It is the best book, in a practical sense, that the rubber trade possesses."

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"We received a copy of THE INDIA RUBBER WORLD. We certainly are very much interested in the paper, and enclose you herewith check for three dollars, for one year's subscription."

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THE Publishers are desirous of obtaining a few copies each of the issues of THE INDIA RUBBER WORLD for October, 1903 and January, 1904, in as good condition as possible. Twenty-five cents per copy will be paid—so long as the need for copies exists—either in cash or extending the accounts of subscribers.

## Perused with Great Interest.

TO THE EDITOR OF THE INDIA RUBBER WORLD:—I take this opportunity of expressing our high opinion of your Journal, which we peruse with great interest on its arrival here monthly. Yours faithfully,

R. B. BLACK.

[Managing Director, The Rubber Co. of Scotland, Limited.]

Forthvale Works, Stirling, August 17, 1904.

## "Best Informed and Most Authoritative."

[FROM "LA JENIA PLANTER," CHICAGO.]

THIS issue of the *Planter* contains a number of articles taken from THE INDIA RUBBER WORLD, now in its fifteenth year, and recognized by every one interested in rubber in any way, as the leading publication in this trade. The information given to its readers can be absolutely relied upon. Its Editor has a skilled and practical knowledge of the manufacturing side of the business, and in recent years has, at his own expense, covered a large portion of the world, so that he might be able to give his readers facts in regard to the production of the raw material on cultivated estates. We have no interest in THE INDIA RUBBER WORLD, except as the best informed and most authoritative journal of

that trade published in this country, but it would be well worth the while of our investors to become its regular readers.

## Helpful to a Salesman.

TO THE INDIA RUBBER WORLD—*Gentlemen:* We enclose our formal order for copies of THE INDIA RUBBER WORLD for December, 1903, and January and February, 1904. You may be interested to know that your articles on Air Brake Hose have attracted the favorable notice of one of our salesmen, who wishes to bring the same before the representatives of the railroad trade with which he comes in contact. Thanking you for your early attention to our request, Yours very truly,

May 24, 1904.

## "A Foolish Book."

A CERTAIN rubber man—not a practical manufacturer, but very successful in the selling end of the business—characterized "Crude Rubber and Compounding Ingredients" as "foolish." When pressed for a more specific criticism, he said that it lacked imagination—an unintentional compliment. Since his pronouncement, however, the practical men in his factory have worn out two copies of the book, and have now purchased a third.

**HERBERT S. KIMBALL,**  
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101 TREMONT STREET, BOSTON, MASS.

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MANAGER or SUPERINTENDENT.—Position wanted as Manager or Superintendent of Mechanical Goods factory, by young man of 14 years' experience. Understands thoroughly, the buying, compounding, and making of Mechanical Goods of all kinds; Belting, Packing, Hose, Molded Goods, Jar Rings, Tires, etc.; can reclaim all kinds of Scrap and Shoes; able to handle selling end; can show satisfactory results quickly; employed. Address Y. Z. X., care of THE INDIA RUBBER WORLD. [667]

## SECOND HAND MACHINERY.

IF it's about second hand Rubber Machinery, write us; if about Scrap Iron, write our competitors, as we do not buy Machinery that is unfit for use. A point to those who want to buy: "We handle all kinds." W. C. COLEMAN CO., Setauket (Long Island), New York.

## WANTED.

WANTED to lease with privilege of purchase, small Rubber Plant within fifty miles of New York City. Address R. P., care of THE INDIA RUBBER WORLD. [665]

WANTED.—One small Grinder or Mill; one Vulcanizer. Must be in good condition. State price and where it can be seen. Address M. G., care of THE INDIA RUBBER WORLD. [666]

## BUSINESS OPPORTUNITY.

A RUBBER factory in a New England town, with larger business in sight than can be handled conveniently with its present capital, solicits a further investment of \$8000 to \$10,000, from some one prepared to join actively some department of its business—either the factory or selling department. Address A. C. R., care of THE INDIA RUBBER WORLD. [656]

## Chinese Coolies for Rubber Plantations.

WE can furnish by January 1, 1905, strong, healthy and carefully selected Coolies, imported direct from China with permission of the Imperial Government, for service on Rubber Plantations. No interruption of work through fiestas. Planters interested can obtain full information by addressing EASTMAN G. CURREY, General Manager, The Eastern Transportation Company, Nashville, Tenn.



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TO THE INDIA RUBBER WORLD.—Gentlemen:—I am pleased to inform you that the advertisement in your paper met with the best results, as I received answers from all parts of the United States and Canada.

Yours truly,

[From an *Indiana World Work.*]

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Yours truly,

[From an *Indiana World Work.*]

### SITUATIONS WANTED.

**CHEMIST.**—A graduate of Cornell University (chemical course), now employed professionally in chemical work, is desirous of making a connection with a rubber factory, where his general knowledge may be of some use, and where an opportunity will be afforded him to gain a practical knowledge of the rubber manufacture. Address CHEMIST, care of THE INDIA RUBBER WORLD. [650]

**CRUDE RUBBER Expert and Rubber Chemist** seeks opening with importing or manufacturing house. Experienced compounder of Rubber; long experience as factory and office Manager. Address C. R., care of THE INDIA RUBBER WORLD. [647]

**EXPERIENCED Manufacturer and Salesman** of Rubber Goods would like to represent good house in New York and vicinity; familiar with conditions; employed; correspondence solicited. Address E. A., care of THE INDIA RUBBER WORLD. [646]

**FOREMAN.**—Position wanted as Foreman in Calender and Mill Room in Mechanical Rubber factory, capable of handling help to good advantage; have had over 20 years' experience at same; qualified to take charge or start a small factory; can furnish best of references. Address C. H. A., care of THE INDIA RUBBER WORLD. [637]

**HOSE MAKER.**—Experienced, reliable, and competent man, wanted to take charge of department making Suction Hose and large Rubber Hose, in an established factory. Address HOSE, care of THE INDIA RUBBER WORLD. [654]

**LET ME** introduce your Compounding Ingredients or Reclaimed Rubber to Manufacturers. I can show how to use them; have had years of experience. Answer quick. X. Y. Z., care of "The India Rubber World." [660]

**MANAGER.**—Man of 40, married, with 20 continuous years in Rubber, as Salesman and Manager. General Manager, General Manager Sales, or Manager Branch House. Conversant with selling market and handling of men, will assume entire responsibility, and can "make good" for entire output, or output from department. Mechanical Sundries, Tires, particularly; highest references. Address H. C. D., care of THE INDIA RUBBER WORLD. [649]

**MANAGER.**—Position wanted as manager with first class Rubber company whose lines are either Mechanical or Sundries. Have had large experience in manufacturing; competent to install machinery and produce any goods in above lines. Address W. A. C., care of THE INDIA RUBBER WORLD. [661]

**POSITION** wanted to represent Mechanical Rubber Goods factory; thoroughly experienced in Mechanical line; have travelled in the Middle West for the past five years. Address E. R. M., care of THE INDIA RUBBER WORLD. [648]

**RECLAIMING.**—Position wanted at Reclaiming rubber. Can reclaim all kinds of Rubber with or without the aid of acids; can put up plant if needed; make all kinds of Substitutes, black and white; also all kinds of Mill and Calender work; compounds for Mechanical Rubber Goods. Address AKA, care of THE INDIA RUBBER WORLD. [663]

**RECLAIMING PLANT.**—Reliable and experienced man who is experienced in the reclaiming of rubber from old Shoes, and competent to take entire charge of a plant, is wanted for a new Rubber Reclaiming Works. Address B. C. D., care of THE INDIA RUBBER WORLD. [655]

**SALESMAN.**—First-class Salesman wanted by new and up-to-date Rubber factory manufacturing Drug Sundries, Molded and Mechanical Goods. Must be capable and personally acquainted with the trade. Good position for right party. Address M. C. O., care of THE INDIA RUBBER WORLD. [650]

### SITUATIONS WANTED.

**SALESMAN** wanted for a complete line of Mechanical Rubber Goods and Cotton Fire Hose, in Western States. Must have established trade and first class references. State length of experience, kind of goods sold, and salary required. Address M. G. C., care of THE INDIA RUBBER WORLD. [651]

**SUPERINTENDENT** wanted, by an old established factory, for the Mechanical Goods department. Must be competent in modern shop methods and experienced in manufacture of the general line of Mechanical Goods. An excellent opportunity. Address R. C. C., care of THE INDIA RUBBER WORLD. [652]

**WANTED.**—A young man with good references as Assistant Superintendent. Must have experience in Mechanical Rubber Goods manufacture. Technical graduate preferred. Address COMPETENT, care of THE INDIA RUBBER WORLD. [664]

### SITUATIONS OPEN.

#### A GOOD POSITION IN EUROPE.

**OPEN** for technical expert in manufacture of hard and soft rubber goods, as superintendent of works. Replies stating experience, present work and salary, etc., to EUROPE, care of THE INDIA RUBBER WORLD. [644]

**SALESMEN.**—Two experienced Mechanical Goods salesmen wanted, one for Chicago and the Middle West; one for New York state, Pennsylvania, and New England states; must be experienced men. Address MECHANICAL, care of THE INDIA RUBBER WORLD. [662]

### FOR SALE.

#### TWENTY RAM HYDRAULIC PRESS.

20 feet by 52 inches Birmingham make.)

Suitable for Making Belts, Matting, and the like; almost new and very little used. Address PRESS, care of "The India Rubber World." [658]

### RUBBER SHOE FACTORY FOR SALE.

The factory of the Deutsche Gummi- und Guttaperchawaaren-Fabrik, formerly Volpi & Schluter, in Berlin, including about 1½ acres of ground, with all buildings, engines, etc., is for sale. The factory produces more than 2000 pairs of India-rubber shoes per day, besides technical articles. The ground about it is open for development. Offers to be addressed to Mr. ROBERT LORENTZ, Kaiser Friedrichstr. 55, Rixdorf, near Berlin, Germany. [657]

### FOR SALE CHEAP.

20,000 feet 2 1-2 inch old Rubber and Cotton Rubber Lined Hose; 20 large canvas covers. E. J. KANE, 260 Front street, New York. [655]

### FOR SALE.

**ALL KINDS RUBBER WASTE.**—We sell at low price, pure unvulcanized Rubber Scrap from Cement Waste. Write for free sample. Best cash prices paid for rubber scrap and waste. Old Wringer Rolls bought and sold a specialty. UNITED STATES WASTE RUBBER Co., No. 487 N. Warren avenue, Brockton, Mass.

See Also Page XXXVII.

# BUYERS' DIRECTORY OF THE RUBBER TRADE.

CLASSIFIED LIST OF MANUFACTURERS AND DEALERS IN INDIA-RUBBER GOODS AND RUBBER MANUFACTURERS' SUPPLIES.

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## MECHANICAL RUBBER GOODS

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Mould Work.  
Packing.  
Valves.  
Washers.

### Mechanical Rubber Goods—General.

Boston Belting Co., Boston-New York.  
Boston Woven Hose & Rubber Co.  
Chicago Rubber Wks., Chicago.  
Cleveland Rubber Co., Cleveland, O.  
Continental Caoutchouc & Gutta Percha Co., Hanover, Germany.  
Empire Rubber Mfg. Co., Trenton, N. J.  
Eureka Fire Hose Co., New York.  
Eureka Rubber Mfg. Co. of Trenton.  
B. F. Goodrich Co., Akron, O.  
Gutta Percha & Rubber Mfg. Co., N. Y.  
Gutta Percha & Rubber Mfg. Co., Toronto.  
Home Rubber Co., Trenton, N. J.  
Lake Shore Rubber Co., Erie, Pa.  
Liverpool Rubber Co., Liverpool, Eng.  
Manhattan Rubber Mfg. Co., New York.  
Mechanical Rubber Co., New York.  
N. J. Car Spring & Rubber Co., Jersey City, N. J.  
New York Belting & Packing Co., N. Y.  
New York Rubber Co., New York.  
North British Rubber Co., Ltd., Edinburgh.  
Peerless Rubber Mfg. Co., New York.  
Republic Rubber Co., Youngstown, Ohio.  
Revere Rubber Co., Boston.  
Jos. Stokes Rubber Co., Trenton, N. J.

## MECHANICAL GOODS.

Trenton Rubber Mfg. Co., Trenton, N. J.  
Voorhees Rubber Mfg. Co., Jersey City.  
Whitman & Barnes Mfg. Co., Akron, O.

### Air Brake Hose.

Boston Belting Co., Boston-New York.  
Boston Woven Hose & Rubber Co.  
Eureka Rubber Mfg. Co. of Trenton.  
B. F. Goodrich Co., Akron, O.  
N. J. Car Spring & Rubber Co., Jersey City.  
Peerless Rubber Mfg. Co., New York.  
Republic Rubber Co., Youngstown, Ohio.  
Revere Rubber Co., Boston-New York.  
Voorhees Rubber Mfg. Co., Jersey City.  
Whitman & Barnes Mfg. Co., Akron, O.

### Belting (Canvas).

Boston Woven Hose & Rubber Co.  
Eureka Fire Hose Co., New York.  
Peerless Rubber Mfg. Co., New York.  
Revere Rubber Co., Boston-New York.  
Sawyer Belting Co., East Cambridge, Mass.

### Billiard Cushions.

Boston Belting Co., Boston.  
B. F. Goodrich Co., Akron, O.  
Manhattan Rubber Mfg. Co., New York.  
New York Belting & Packing Co., Ltd.  
New York Rubber Co., New York.  
Revere Rubber Co., Boston-New York.  
Whitman & Barnes Mfg. Co., Akron, O.

### Blankets—Printers'.

Boston Belting Co., Boston.  
Hodgman Rubber Co., New York.  
Liverpool Rubber Co., Liverpool, Eng.  
N. J. Car Spring & Rubber Co., Jersey City, N. J.  
Revere Rubber Co., Boston-New York.  
Voorhees Rubber Mfg. Co., Jersey City.

### Brushes.

American Hard Rubber Co., New York.  
Boston Woven Hose & Rubber Co.  
C. J. Bailey & Co., Boston.

## MECHANICAL GOODS.

### Buffers.

Boston Belting Co., Boston-New York.  
Liverpool Rubber Co., Ltd., Liverpool.

### "Bull Dog" Packing.

Boston Woven Hose & Rubber Co.

### Card Cloths.

Mechanical Fabric Co., Providence, R. I.

### Carriage Mats.

Boston Belting Co., Boston-New York.  
Boston Woven Hose & Rubber Co.  
B. F. Goodrich Co., Akron, O.  
N. J. Car Spring & Rubber Co., Jersey City, N. J.  
Peerless Rubber Mfg. Co., New York.  
Voorhees Rubber Mfg. Co., Jersey City.

### Coin Mats.

B. F. Goodrich Co., Akron, O.  
N. J. Car Spring & Rubber Co., Jersey City, N. J.  
New York Belting & Packing Co., N. Y.

### Cord (Pure Rubber).

Boston Belting Co., Boston-New York.  
Boston Woven Hose & Rubber Co.  
Cleveland Rubber Co., Cleveland, O.  
Dayol Rubber Co., Providence, R. I.  
Empire Rubber Mfg. Co., Trenton, N. J.  
Home Rubber Co., Trenton, N. J.  
Manhattan Rubber Mfg. Co., New York.  
N. J. Car Spring & Rubber Co., Jersey City, N. J.  
New York Belting & Packing Co., N. Y.  
Peerless Rubber Mfg. Co., New York.  
Republic Rubber Co., Youngstown, O.  
Revere Rubber Co., Boston-New York.  
Voorhees Rubber Mfg. Co., Jersey City.

### Deckle Straps.

Boston Belting Co., Boston.

## MECHANICAL GOODS.

### Deckle Straps Continued.

Liverpool Rubber Co., Liverpool, Eng.  
Mechanical Rubber Co., Chicago.  
New York Belting & Packing Co., N. Y.  
Republic Rubber Co., Youngstown, O.  
Revere Rubber Co., Boston-New York.

### Door Springs.

Hodgman Rubber Co., New York.

### Dredging Sleeves.

Boston Belting Co., Boston-New York.  
Boston Woven Hose & Rubber Co.  
B. F. Goodrich Co., Akron, O.  
N. J. Car Spring & Rubber Co., Jersey City.  
Republic Rubber Co., Youngstown, O.

### Fleshing Bands.

Republic Rubber Co., Youngstown, O.

### Force Cups.

Hodgman Rubber Co., New York.

### "Forsyth" Combination Packing.

Boston Belting Co., Boston-New York.

### Fruit Jar Rings.

Boston Woven Hose & Rubber Co.  
Cleveland Rubber Co., Cleveland, O.  
B. F. Goodrich Co., Akron, O.  
Empire Rubber Mfg. Co., Trenton, N. J.  
Eureka Rubber Mfg. Co. of Trenton.  
Manhattan Rubber Mfg. Co., New York.  
Republic Rubber Co., Youngstown, Ohio.  
New York Belting & Packing Co., N. Y.  
Whitman & Barnes Mfg. Co., Akron, O.

### Fuller Balls.

B. F. Goodrich Co., Akron, O.  
N. J. Car Spring & Rubber Co., Jersey City.



## RUBBER BUYERS' DIRECTORY—CONTINUED.

## MECHANICAL GOODS.

## Fuller Balls. Continued.

Peerless Rubber Mfg. Co., New York.  
Republic Rubber Co., Youngstown, O.  
Whitman & Barnes Mfg. Co., Akron, O.

## Gage Glass Washers.

Boston Belting Co., Boston, Mass.  
Cleveland Rubber Co., Cleveland, O.  
Empire Rubber Mfg. Co., Trenton, N. J.  
Liverpool Rubber Co., Liverpool, Eng.  
Manhattan Rubber Mfg. Co., New York.  
Mechanical Rubber Co., Chicago, Ill.  
N. J. Car Spring & Rubber Co., Jersey City, N. J.  
New York Belting & Packing Co., N. Y.  
New York Rubber Co., New York.  
Revere Rubber Co., Boston, Mass.  
Jos. Stokes Rubber Co., Trenton, N. J.  
Voorhees Rubber Mfg. Co., Jersey City, N. J.

## Gas-Bags (Rubber).

Cleveland Rubber Co., Cleveland, O.  
Davol Rubber Co., Providence, R. I.  
B. F. Goodrich Co., Akron, O.  
Liverpool Rubber Co., Liverpool, Eng.  
N. J. Car Spring & Rubber Co., Jersey City, N. J.  
Peerless Rubber Mfg. Co., New York.  
Tyer Rubber Co., Andover, Mass.  
Voorhees Rubber Mfg. Co., Jersey City.

## Gasket Tubing.

Jenkins Bros., New York.

## Grain Drill Tubes.

Boston Belting Co., Boston-New York.  
Republic Rubber Co., Youngstown, O.  
Whitman & Barnes Mfg. Co., Akron, O.

## Hat Bags.

Boston Belting Co., Boston.  
Home Rubber Co., Trenton, N. J.  
Manhattan Rubber Mfg. Co., New York.  
Mattison Rubber Co.  
Mechanical Rubber Co., Chicago.  
N. J. Car Spring & Rubber Co., Jersey City, N. J.  
New York Belting & Packing Co., N. Y.  
New York Rubber Co., New York.  
Peerless Rubber Mfg. Co., New York.  
Republic Rubber Co., Youngstown, O.  
Revere Rubber Co., Boston.

## Horse Shoe Pads.

Peerless Rubber Mfg. Co., New York.  
Plymouth Rubber Co., Stoughton, Mass.  
Revere Rubber Co., Boston-New York.  
Voorhees Rubber Mfg. Co., Jersey City.  
Whitman & Barnes Mfg. Co., Akron, O.

## Hose—Armored.

Boston Belting Co., Boston-New York.  
B. F. Goodrich Co., Akron, O.  
N. J. Car Spring & Rubber Co., Jersey City.  
Peerless Rubber Mfg. Co., New York.  
Republic Rubber Co., Youngstown, O.  
Revere Rubber Co., Boston-New York.  
Voorhees Rubber Mfg. Co., Jersey City.

## Hose Couplings.

Boston Woven Hose & Rubber Co.

## Hose Fittings.

Boston Woven Hose & Rubber Co.

## Hose Linings.

Boston Belting Co., Boston-New York.  
Boston Woven Hose & Rubber Co.  
Empire Rubber Mfg. Co., Trenton, N. J.  
Eureka Rubber Mfg. Co., Trenton, N. J.  
N. J. Car Spring & Rubber Co., Jersey City, N. J.  
Peerless Rubber Mfg. Co., New York.

## Hose Nozzles.

Boston Woven Hose & Rubber Co.

## Hose—Protected.

Boston Belting Co., Boston-New York.  
Revere Rubber Co., Boston-New York.  
Voorhees Rubber Mfg. Co., Jersey City.

## Hose Racks.

Wirt & Knox Mfg. Co., Philadelphia.

## Hose Reels.

Wirt & Knox Mfg. Co., Philadelphia.

## MECHANICAL GOODS.

## Hose—Rubber Lined.

## GUTTA PERCHA AND RUBBER.

Boston Belting Co., Boston-New York.  
Boston Woven Hose & Rubber Co.  
Cleveland Rubber Co., Cleveland, O.  
Empire Rubber Mfg. Co., Trenton, N. J.  
Eureka Fire Hose Co., New York.  
Eureka Rubber Mfg. Co., of Trenton.  
B. F. Goodrich Co., Akron, O.  
Gutta Percha & Rubber Mfg. Co., N. Y.  
Gutta Percha and Rubber Mfg. Co. of Toronto.  
Home Rubber Co., Trenton, N. J.  
Manhattan Rubber Mfg. Co., New York.  
N. J. Car Spring & Rubber Co., Jersey City, N. J.  
New York Belting & Packing Co., N. Y.  
Peerless Rubber Mfg. Co., New York.  
Republic Rubber Co., Youngstown, O.  
Revere Rubber Co., Boston.  
Jos. Stokes Rubber Co., Trenton, N. J.  
Voorhees Rubber Mfg. Co., Jersey City.  
Whitman & Barnes Mfg. Co., Akron, O.

## Hose—Submarine.

Boston Belting Co., Boston-New York.  
B. F. Goodrich Co., Akron, O.  
Republic Rubber Co., Youngstown, O.

## Hose—Wire Wound.

Boston Belting Co., Boston-New York.  
Boston Woven Hose & Rubber Co.  
B. F. Goodrich Co., Akron, O.  
N. J. Car Spring & Rubber Co., Jersey City.  
Peerless Rubber Mfg. Co., New York.  
Republic Rubber Co., Youngstown, O.  
Revere Rubber Co., Boston.

## "Jenkins '96" Packing.

Jenkins Bros., New York.

## Lawn Sprinklers.

Boston Woven Hose & Rubber Co.

## Mallets (Rubber).

Boston Belting Co., Boston-New York.  
B. F. Goodrich Co., Akron, O.  
Peerless Rubber Mfg. Co., New York.  
Revere Rubber Co., Boston-New York.

## Mould Work.

## [See Mechanical Rubber Goods.]

Davidson Rubber Co., Boston.  
Davol Rubber Co., Providence, R. I.  
Faultless Rubber Co., Akron, O.  
Hodgman Rubber Co., Belleville, N. J.  
Hodgman Rubber Co., New York.  
La Crosse (Wis.) Rubber Mills Co.  
Mattison Rubber Co., New York.  
National India Rubber Co., Bristol, R. I.  
Plymouth Rubber Co., Stoughton, Mass.  
Tyer Rubber Co., Andover, Mass.

## "Nubian" Packing.

Voorhees Rubber Mfg. Co., Jersey City.

## Oil Well Supplies.

Boston Belting Co., Boston-New York.  
Boston Woven Hose & Rubber Co.  
B. F. Goodrich Co., Akron, O.  
Lake Shore Rubber Co., Erie, Pa.  
N. J. Car Spring & Rubber Co., Jersey City.  
Peerless Rubber Mfg. Co., New York.  
Republic Rubber Co., Youngstown, O.  
Revere Rubber Co., Boston-Pittsburgh.  
Voorhees Rubber Mfg. Co., Jersey City.  
Whitman & Barnes Mfg. Co., Akron, O.

## Paper Machine Rollers.

Boston Belting Co., Boston-New York.  
B. F. Goodrich Co., Akron, O.  
Republic Rubber Co., Youngstown, O.  
Revere Rubber Co., Boston-New York.  
Peerless Rubber Mfg. Co., New York.  
Voorhees Rubber Mfg. Co., Jersey City.

## "Perfection" Belting.

Boston Woven Hose & Rubber Co.

## Plumbers' Supplies.

B. F. Goodrich Co., Akron, O.  
Republic Rubber Co., Youngstown, O.

## Pump Buckets.

B. F. Goodrich Co., Akron, O.  
Peerless Rubber Mfg. Co., New York.  
Republic Rubber Co., Youngstown, O.

## Pump Valves.

Jenkins Bros., New York.

## MECHANICAL GOODS.

## "Rainbow" Packing.

Peerless Rubber Mfg. Co., New York.

## Reels—Hose.

Boston Belting Co., Boston-New York.  
Boston Woven Hose & Rubber Co.  
Peerless Rubber Mfg. Co., New York.  
Republic Rubber Co., Youngstown, O.

## Rings.

Boston Belting Co., Boston-New York.  
B. F. Goodrich Co., Akron, O.  
Peerless Rubber Mfg. Co., New York.  
Plymouth Rubber Co., Stoughton, Mass.  
Republic Rubber Co., Youngstown, O.

## Rollers—Rubber Covered.

Boston Belting Co., Boston.  
Cleveland Rubber Co., Cleveland, O.  
Empire Rubber Mfg. Co., Trenton, N. J.  
Eureka Rubber Mfg. Co., of Trenton.  
B. F. Goodrich Co., Akron, O.  
Home Rubber Co., Trenton, N. J.  
Manhattan Rubber Mfg. Co., New York.  
Mechanical Rubber Co., Chicago.  
N. J. Car Spring & Rubber Co., Jersey City, N. J.  
New York Belting & Packing Co., N. Y.  
Peerless Rubber Mfg. Co., New York.  
Plymouth Rubber Co., Stoughton, Mass.  
Republic Rubber Co., Youngstown, O.  
Revere Rubber Co., Boston-New York.

## Sewing Machine Rubbers.

B. F. Goodrich Co., Akron, O.

## Springs—Rubber.

Boston Belting Co., Boston-New York.  
B. F. Goodrich Co., Akron, O.  
Hardman Rubber Co., Belleville, N. J.  
Liverpool Rubber Co., Liverpool, Eng.  
N. J. Car Spring & Rubber Co., Jersey City.  
Peerless Rubber Mfg. Co., New York.  
Plymouth Rubber Co., Stoughton, Mass.  
Republic Rubber Co., Youngstown, Ohio.  
Revere Rubber Co., Boston-New York.  
Voorhees Rubber Mfg. Co., Jersey City.

## Stair Treads.

Boston Belting Co., Boston-New York.  
Boston Woven Hose & Rubber Co.  
Cleveland Rubber Co., Cleveland, O.  
Empire Rubber Mfg. Co., Trenton, N. J.  
Home Rubber Co., Trenton, N. J.  
Liverpool Rubber Co., Liverpool, Eng.  
Manhattan Rubber Mfg. Co., New York.  
N. J. Car Spring & Rubber Co., Jersey City, N. J.  
New York Belting & Packing Co., N. Y.  
New York Rubber Co., New York.  
Peerless Rubber Mfg. Co., New York.  
Republic Rubber Co., Youngstown, O.  
Revere Rubber Co., Boston-New York.  
Voorhees Rubber Mfg. Co., Jersey City.

## Thread.

Mechanical Fabric Co., Providence, R. I.  
Revere Rubber Co., Boston.

## Tiling.

B. F. Goodrich Co., Akron, O.  
Gutta Percha & Rubber Mfg. Co., N. Y.  
N. J. Car Spring & Rubber Co., Jersey City.  
New York Belting & Packing Co., N. Y.  
Peerless Rubber Mfg. Co., New York.  
Republic Rubber Co., Youngstown, Ohio.  
Voorhees Rubber Mfg. Co., Jersey City.

## Tires.

## BICYCLE AND CARRIAGE.

Continental Caoutchouc & Gutta-percha Co., Hanover.  
Empire Rubber Mfg. Co., Trenton, N. J.  
B. F. Goodrich Co., Akron, O.  
Gutta Percha & Rubber Mfg. Co., Toronto.  
Kokomo Rubber Co., Kokomo, Ind.  
Lake Shore Rubber Co., Erie, Pa.  
Liverpool Rubber Co., Liverpool, Eng.  
North British Rubber Co., Ltd., Edinburgh.  
Plymouth Rubber Co., Stoughton, Mass.  
Republic Rubber Co., Youngstown, O.

## CARRIAGE.

Boston Belting Co., Boston-New York.  
Revere Rubber Co., Boston-New York.  
Eureka Rubber Mfg. Co., Trenton, N. J.

## MECHANICAL GOODS.

## Truck Bands.

Boston Belting Co., Boston.  
Cleveland Rubber Co., Cleveland, O.  
Empire Rubber Mfg. Co., Trenton, N. J.  
B. F. Goodrich Co., Akron, O.  
Home Rubber Co., Trenton, N. J.  
Manhattan Rubber Mfg. Co., New York.  
Mechanical Rubber Co., Chicago.  
N. J. Car Spring & Rubber Co., Jersey City, N. J.  
New York Belting & Packing Co., N. Y.  
Peerless Rubber Mfg. Co., New York.  
Republic Rubber Co., Youngstown, O.  
Voorhees Rubber Mfg. Co., Jersey City.  
Whitman & Barnes Mfg. Co., Akron, O.

## Tubing.

## [See Mechanical Rubber Goods.]

American Hard Rubber Co., New York.  
Davidson Rubber Co., Boston.  
Davol Rubber Co., Providence, R. I.  
Hardman Rubber Co., Belleville, N. J.  
Plymouth Rubber Co., Stoughton, Mass.  
Tyer Rubber Co., Andover, Mass.

## Tubing (Beer).

Boston Belting Co., Boston-New York.  
Boston Woven Hose & Rubber Co.  
B. F. Goodrich Co., Akron, O.  
Peerless Rubber Mfg. Co., New York.  
Plymouth Rubber Co., Stoughton, Mass.  
Republic Rubber Co., Youngstown, O.  
Voorhees Rubber Mfg. Co., Jersey City.

## "Usudurian" Packing.

Revere Rubber Co., Boston-New York.

## Valve Balls.

Boston Belting Co., Boston.  
Cleveland Rubber Co., Cleveland, O.  
Manhattan Rubber Mfg. Co., New York.  
Mechanical Rubber Co., Chicago.  
New York Belting & Packing Co., N. Y.  
New York Rubber Co., New York.  
Peerless Rubber Mfg. Co., New York.  
Republic Rubber Co., Youngstown, O.  
Whitman & Barnes Mfg. Co., Akron, O.

## Valve Discs.

American Hard Rubber Co., New York.  
Boston Belting Co., Boston-New York.  
B. F. Goodrich Co., Akron, O.  
Peerless Rubber Mfg. Co., New York.  
Republic Rubber Co., Youngstown, O.  
Revere Rubber Co., Boston-New York.

## Valves.

## [See Mechanical Rubber Goods.]

Jenkins Bros., New York-Chicago.  
Plymouth Rubber Co., Stoughton, Mass.

## Wringer Rolls.

Cleveland Rubber Co., Cleveland, O.  
B. F. Goodrich Co., Akron, O.  
Republic Rubber Co., Youngstown, O.

## DRUGGISTS' AND STATIONERS' SUNDRIES

## Atomizers.

## Bandages.

## Bulbs.

## Water Bottles.

## Druggists' Sundries—General.

American Hard Rubber Co., New York.  
C. J. Bailey & Co., Boston.  
Geo. Borgfeldt & Co., New York.  
Cleveland Rubber Co., Cleveland, O.  
Davidson Rubber Co., Boston.  
Davol Rubber Co., Providence, R. I.  
Faultless Rubber Co., Akron, O.  
B. F. Goodrich Co., Akron, O.  
Hanover Rubber Co., Hanover, Germany.  
Hardman Rubber Co., Belleville, N. J.  
Hodgman Rubber Co., New York.  
North British Rubber Co., Ltd., Edinburgh.  
Tyer Rubber Co., Andover, Mass.

## Balls, Dolls and Toys.

Continental Caoutchouc & Gutta-percha Co.  
New York Rubber Co., New York.  
Whitman & Barnes Mfg. Co., Akron, O.



## RUBBER BUYERS' DIRECTORY—CONTINUED.

## DRUGGISTS' SUNDRIES

## Combs.

American Hard Rubber Co., New York  
Geo. Borgfeldt & Co., New York.  
Hanover Rubber Co., Hanover, Germany.

## Elastic Bands.

Davidson Rubber Co., Boston.  
Davol Rubber Co., Providence, R. I.  
B. F. Goodrich Co., Akron, O.  
Hodgman Rubber Co., New York-Boston.  
Tyer Rubber Co., Andover, Mass.  
Whitman & Barnes Mfg. Co., Akron, O.

## Erasive Rubbers.

Davidson Rubber Co., Boston.  
B. F. Goodrich Co., Akron, O.  
Hardman Rubber Co., Belleville, N. J.  
Mattson Rubber Co., New York.

## Finger Cots.

Faultless Rubber Mfg. Co., Akron, O.  
B. F. Goodrich Co., Akron, O.  
Pure Gum Specialty Co., Barberton, O.

## Gloves.

Davol Rubber Co., Providence, R. I.  
Faultless Rubber Co., Akron, O.  
B. F. Goodrich Co., Akron, O.  
Pure Gum Specialty Co., Barberton, O.

## Hard Rubber Goods.

American Hard Rubber Co., New York.  
Geo. Borgfeldt & Co., New York.  
Davol Rubber Co., Providence, R. I.  
Hanover Rubber Co., Hanover, Germany.  
Hardman Rubber Co., Belleville, N. J.  
Stokes Rubber Co., Joseph, Trenton, N. J.  
Tyer Rubber Co., Andover, Mass.

## Hospital Sheetings.

Cleveland Rubber Co., Cleveland, O.  
Davidson Rubber Co., Boston.  
Davol Rubber Co., Providence, R. I.  
Hodgman Rubber Co., New York.  
Plymouth Rubber Co., Stoughton, Mass.  
Tyer Rubber Co., Andover, Mass.

## Hot Water Bottles.

American Hard Rubber Co., New York  
Cleveland Rubber Co., Cleveland, O.  
Davidson Rubber Co., Boston.  
Davol Rubber Co., Providence, R. I.  
B. F. Goodrich Co., Akron, O.  
Hardman Rubber Co., Belleville, N. J.  
Hodgman Rubber Co., New York-Boston.  
Tyer Rubber Co., Andover, Mass.

## Ice Bags.

B. F. Goodrich Co., Akron, O.  
Hodgman Rubber Co., New York.  
Pure Gum Specialty Co., Barberton, O.

## Ice Caps.

B. F. Goodrich Co., Akron, O.  
Hardman Rubber Co., Belleville, N. J.  
Pure Gum Specialty Co., Barberton, O.  
Tyer Rubber Co., Andover, Mass.

## Life Preservers.

Hodgman Rubber Co., New York.

## Mittens.

Davol Rubber Co., Providence, R. I.  
Faultless Rubber Co., Akron, O.

## Nipples.

Cleveland Rubber Co., Cleveland, O.  
Davidson Rubber Co., Boston.  
Davol Rubber Co., Providence, R. I.  
Faultless Rubber Co., Akron, O.  
B. F. Goodrich Co., Akron, O.  
Pure Gum Specialty Co., Barberton, O.  
Tyer Rubber Co., Andover, Mass.

## Notions.

American Hard Rubber Co., New York.  
Davidson Rubber Co., Boston.  
Tyer Rubber Co., Andover, Mass.

## Rulers.

American Hard Rubber Co., New York.

## Sponges (Rubber).

Faultless Rubber Co., Ashland, Ohio.  
B. F. Goodrich Co., Akron, O.

## Stationers' Sundries.

American Hard Rubber Co., New York.  
Geo. Borgfeldt & Co., New York.  
Cleveland Rubber Co., Cleveland, O.  
Davidson Rubber Co., Boston.  
Davol Rubber Co., Providence, R. I.

## DRUGGISTS' SUNDRIES.

## Stationers' Sundries Continued.

B. F. Goodrich Co., Akron, O.  
Hanover Rubber Co., Hanover, Germany.  
Hardman Rubber Co., Belleville, N. J.  
Hodgman Rubber Co., New York-Boston.  
Tyer Rubber Co., Andover, Mass.

## Stopples (Rubber).

Cleveland Rubber Co., Cleveland, O.  
Davol Rubber Co., Providence, R. I.  
Hodgman Rubber Co., New York.  
Manhattan Rubber Mfg. Co., New York.  
New York Belting & Packing Co., N. Y.  
Tyer Rubber Co., Andover, Mass.  
Whitman & Barnes Mfg. Co., Akron, O.

## Surgical Appliances.

Faultless Rubber Co., Akron, O.

## Syringes.

American Hard Rubber Co., New York.  
Cleveland Rubber Co., Cleveland, O.  
Davol Rubber Co., Providence, R. I.  
B. F. Goodrich Co., Akron, O.  
Hardman Rubber Co., Belleville, N. J.  
Hodgman Rubber Co., New York.  
Tyer Rubber Co., Andover, Mass.

## Throat Bags.

Cleveland Rubber Co., Cleveland, O.  
Davol Rubber Co., Providence, R. I.  
B. F. Goodrich Co., Akron, O.  
Tyer Rubber Co., Andover, Mass.

## Tobacco Pouches.

B. F. Goodrich Co., Akron, O.  
Pure Gum Specialty Co., Barberton, O.  
Tyer Rubber Co., Andover, Mass.

## Toys.

Geo. Borgfeldt & Co., New York.  
B. F. Goodrich Co., Akron, O.  
Hanover Rubber Co., Hanover, Germany.

MACKINTOSHED  
AND SURFACE  
GOODS

## Air Goods (Rubber).

Cleveland Rubber Co., Cleveland, O.  
Davol Rubber Co., Providence, R. I.  
B. F. Goodrich Co., Akron, O.  
Hodgman Rubber Co., New York.  
New York Rubber Co., New York.  
National India Rubber Co., Providence.  
Tyer Rubber Co., Andover, Mass.

## Air Mattresses.

Mechanical Fabric Co., Providence, R. I.

## Aprons.

Hodgman Rubber Co., New York.

## Barbers' Bibs.

Davol Rubber Co., Providence, R. I.  
Tyer Rubber Co., Andover, Mass.

## Bathing Caps.

Davol Rubber Co., Providence, R. I.  
B. F. Goodrich Co., Akron, O.

## Bellows Cloths.

Boston Rubber Co., Boston.  
Cleveland Rubber Co., Cleveland, O.  
Hodgman Rubber Co., New York.  
La Crosse (Wis.) Rubber Mills Co.

## Calendering.

La Crosse (Wis.) Rubber Mills Co.  
Milford Rubber Co., Boston.  
Plymouth Rubber Co., Stoughton, Mass.

## Canoe Beds.

Hodgman Rubber Co., New York.

## Carriage Ducks and Drills.

Cleveland Rubber Co., Cleveland, O.  
Empire Rubber Mfg. Co., Trenton, N. J.  
Eureka Rubber Mfg. Co. of Trenton.  
Gutta Percha & Rubber Mfg. Co., Toronto.

## Clothing.

Apsley Rubber Co., Hudson, Mass.  
Cleveland Rubber Co., Cleveland, O.  
Granby Rubber Co., Granby, Quebec.  
Gutta Percha & Rubber Mfg. Co. of Toronto.  
Hodgman Rubber Co., New York.  
La Crosse (Wis.) Rubber Mills Co.  
North British Rubber Co., Ltd., Edinburgh.

## MACKINTOSHED GOODS.

## Cravenette.

Cravenette Co., Ltd.

## Diving Dresses.

Hodgman Rubber Co., New York.

## Dress Shields.

Hodgman Rubber Co., New York.  
Mattson Rubber Co., New York.

## Horse Covers.

Hodgman Rubber Co., New York.

## Leggings.

Cleveland Rubber Co., Cleveland, O.  
Hodgman Rubber Co., New York.

## Mackintoshes.

[See Clothing.]

## Proofing.

La Crosse (Wis.) Rubber Mills Co.  
Milford Rubber Co., Boston.  
Plymouth Rubber Co., Stoughton, Mass.

## Rain Coats.

Cravenette Co., Ltd.

## Rubber Coated Cloths.

Mechanical Fabric Co., Providence, R. I.

RUBBER  
FOOTWEAR

## Boots and Shoes.

American Rubber Co., Boston.  
Apsley Rubber Co., Hudson, Mass.  
Boston Rubber Shoe Co., Boston.  
L. Candee & Co., New Haven, Ct.  
Granby Rubber Co., Granby, Quebec.  
Gutta Percha & Rubber Mfg. Co. of Toronto.  
Hood Rubber Co., Boston.  
Jersey Rubber Shoe Co., New York.  
Liverpool Rubber Co., Liverpool, Eng.  
Lycoming Rubber Co., Williamsport, Pa.  
Meyer Rubber Co., New York.  
National India Rubber Co., Boston-Providence.  
North British Rubber Co., Ltd., Edinburgh.  
United States Rubber Co., New York.  
Wales-Goodyear Rubber Co., Boston.  
Woonsocket Rubber Co., Providence.

## Heels and Soles.

Boston Woven Hose & Rubber Co.  
Continental Caoutchouc & Gutta-percha Co., Hanover.  
Plymouth Rubber Co., Stoughton, Mass.

## Tennis Shoes.

American Rubber Co., Boston.  
Boston Rubber Shoe Co., Boston.  
Granby Rubber Co., Granby, Quebec.  
Liverpool Rubber Co., Liverpool, Eng.  
National India Rubber Co., Providence.  
United States Rubber Co., New York.

## Tennis Soles.

Jos. Stokes Rubber Co., Trenton, N. J.

## Wading Pants.

Hodgman Rubber Co., New York.

SPORTING  
GOODS

## Foot Balls.

Cleveland Rubber Co., Cleveland, O.  
B. F. Goodrich Co., Akron, O.  
Hodgman Rubber Co., New York.

## Golf Balls.

Boston Belting Co., Boston.  
Davidson Rubber Co., Boston.  
B. F. Goodrich Co., Akron, O.  
Whitman & Barnes Mfg. Co., Akron, O.

## Submarine Outfits.

Hodgman Rubber Co., New York.

## Sporting Goods.

B. F. Goodrich Co., Akron, O.  
Hodgman Rubber Co., New York.  
Tyer Rubber Co., Andover, Mass.

## Striking Bags.

B. F. Goodrich Co., Akron, O.  
Pure Gum Specialty Co., Barberton, O.

DENTAL AND  
STAMP RUBBER

## Dental Gum.

American Hard Rubber Co., New York.  
Cleveland Rubber Co., Cleveland, O.  
Tyer Rubber Co., Andover, Mass.

## Rubber Dam.

Cleveland Rubber Co., Cleveland, O.  
Davol Rubber Co., Providence, R. I.  
Hodgman Rubber Co., New York.  
Tyer Rubber Co., Andover, Mass.

## Stamp Gum.

Mattson Rubber Co., New York.  
Mechanical Rubber Co., Chicago, Ill.  
N. J. Car Spring & Rubber Co., Jersey City, N. J.  
New York Belting & Packing Co., N. Y.

## ELECTRICAL

## Electrical Supplies.

American Hard Rubber Co., New York.  
Lake Shore Rubber Co., Erie, Pa.  
Joseph Stokes Rubber Co., Trenton, N. J.  
Massachusetts Chemical Co., Boston.  
Tyer Rubber Co., Andover, Mass.

## Friction Tape.

Boston Belting Co., Boston.  
Boston Woven Hose & Rubber Co.  
Cleveland Rubber Co., Cleveland, O.  
B. F. Goodrich Rubber Co., Akron, O.  
Massachusetts Chemical Co., Boston.  
Mechanical Rubber Co., Chicago.  
Home Rubber Co., Trenton, N. J.  
Revere Rubber Co., Boston-New York.  
Whitman & Barnes Mfg. Co., Akron, O.

## Hard Rubber Goods.

American Hard Rubber Co., New York.  
Joseph Stokes Rubber Co., Trenton, N. J.

## Insulating Compounds.

Gutta-Percha & Rubber Mfg. Co., Toronto.  
Massachusetts Chemical Co., Boston.

## Insulated Wire and Cables.

National India Rubber Co., Providence.

## Splicing Compound.

Home Rubber Co., Trenton, N. J.

## MISCELLANEOUS

## Architect and Engineer.

Herbert S. Kimball, Boston.

## Cable Code.

International Cable Directory Co., New York.

## Cement (Rubber).

Boston Belting Co., Boston.  
B. F. Goodrich Co., Akron, O.  
Manhattan Rubber Mfg. Co., New York.  
N. J. Car Spring & Rubber Co., Jersey City, N. J.  
New York Belting & Packing Co., N. Y.

## Chemical Analyses.

Durand Woodman, Ph. D., New York.  
H. L. Terry, Manchester, England.

## Chemists.

Stephen P. Sharples, Boston, Mass.  
Durand Woodman, Ph. D., New York.

## Investments.

Badger Mexican Plantation Co., Racine, Wis.  
Conservative Rubber Production Co., San Francisco.  
Hidalgo Plantation and Commercial Co., San Francisco.

## Rubber Lands For Sale.

O. H. Harrison, San Francisco.

## Rubber Planting.

Badger Mexican Plantation Co., Racine, Wis.  
Conservative Rubber Production Co., San Francisco.  
Hidalgo Plantation and Commercial Co., San Francisco.

## Thermometers.

Hohmann & Maurer Mfg. Co., Rochester, N. Y.



## MACHINERY AND SUPPLIES FOR RUBBER MILLS.

RUBBER  
MACHINERY

## Acid Tanks.

Birmingham Iron Foundry, Derby, Ct.

## Ball Making Machine.

H. Bestorff, Hanover, Germany.

## Band Cutting Machine.

A. Adamson, Akron, O.  
Birmingham Iron Foundry, Derby, Ct.

## Belt Folding Machines.

Birmingham Iron Foundry, Derby, Ct.  
Farrel Foundry & Mach. Co., Ansonia, Ct.

## Belt Slitters.

Birmingham Iron Foundry, Derby, Ct.  
Farrel Foundry & Mach. Co., Ansonia, Ct.

## Belt Stretchers.

Birmingham Iron Foundry, Derby, Ct.  
Farrel Foundry & Mach. Co., Ansonia, Ct.  
Hoggson & Pettis Mfg. Co., New Haven, Ct.

## Blowers.

B. F. Sturtevant Co., Boston.

## Boilers.

William R. Thropp, Trenton, N. J.

## Braidiers.

New England Butt Co., Providence, R. I.

## Buckles.

The Weld Mfg. Co., Boston.

## Calenders.

Birmingham Iron Foundry, Derby, Ct.  
Farrel Foundry & Mach. Co., Ansonia, Ct.  
Textile-Finishing Machinery Co., Providence, R. I.

## Castings.

A. Adamson, Akron, O.  
Birmingham Iron Foundry, Derby, Ct.  
Farrel Foundry & Mach. Co., Ansonia, Ct.

## Chucks (Lathe).

Hoggson &amp; Pettis Mfg. Co., New Haven, Ct.

## Churns.

American Tool &amp; Machine Co., Boston.

## Cloth Dryers.

Birmingham Iron Foundry, Derby, Ct.  
Farrel Foundry & Mach. Co., Ansonia, Ct.

## Clutches.

Farrel Foundry &amp; Mach. Co., Ansonia, Ct.

## Crackers.

Birmingham Iron Foundry, Derby, Ct.

## Devulcanizers.

Birmingham Iron Foundry, Derby, Ct.  
Edred W. Clark, Hartford, Ct.  
William R. Thropp, Trenton, N. J.

## Dies.

Hoggson &amp; Pettis Mfg. Co., New Haven, Ct.

## Doubling Machines.

Holmes Bros., Chicago, Ill.

## Drying Apparatus.

American Tool &amp; Machine Co., Boston.

## Drying Machines.

B. F. Sturtevant Co., Boston.  
Joseph P. Devine, Buffalo, N. Y.  
Birmingham Iron Foundry, Derby, Ct.  
Textile-Finishing Machinery Co., Providence, R. I.

## Dynamoes.

B. F. Sturtevant Co., Boston.

## Embossing Calenders.

Textile-Finishing Machinery Co., Providence, R. I.

## Engines.

B. F. Sturtevant Co., Boston.

## Engraving Roll.

William R. Thropp, Trenton, N. J.  
Hoggson & Pettis Mfg. Co., New Haven, Ct.

## Exhaust Fans and Heads.

B. F. Sturtevant Co., Boston.

## Factory Construction.

Herbert S. Kimball, Boston.

## Fans (Electric).

B. F. Sturtevant Co., Boston.

## Fans (Exhaust and Ventilating).

B. F. Sturtevant Co., Boston.

## Forges.

B. F. Sturtevant Co., Boston.

## Fuel Economizers.

B. F. Sturtevant Co., Boston.

## Gas Exhausters.

B. F. Sturtevant Co., Boston.

## RUBBER MACHINERY.

## Gearing.

Birmingham Iron Foundry, Derby, Ct.  
Farrel Foundry & Mach. Co., Ansonia, Ct.

## Generating Sets.

B. F. Sturtevant Co., Boston.

## Grinders.

Birmingham Iron Foundry, Derby, Ct.  
Farrel Foundry & Mach. Co., Ansonia, Ct.  
William R. Thropp, Trenton, N. J.

## Hangers.

Farrel Foundry &amp; Mach. Co., Ansonia, Ct.

## Heating Apparatus.

B. F. Sturtevant Co., Boston.

## Hose Covering Machines.

New England Butt Co., Providence, R. I.

## Hose Making Machines.

Birmingham Iron Foundry, Derby, Ct.

## Hose Wrapping Machines.

A. Adamson, Akron, Ohio.  
Birmingham Iron Foundry, Derby, Ct.

## Hydraulic Accumulators.

Birmingham Iron Foundry, Derby, Ct.  
Farrel Foundry & Mach. Co., Ansonia, Ct.

## Lasts (Rubber Shoe).

Middlesex Last Co., Boston.

## Lathes—Hard Rubber.

A. Adamson, Akron, Ohio.

## Jar Ring—Lathes.

A. Adamson, Akron, Ohio.  
Birmingham Iron Foundry, Derby, Ct.

William R. Thropp, Trenton, N. J.

## Machinists' Tools.

Hoggson &amp; Pettis Mfg. Co., New Haven, Ct.

## Mechanical Draft.

B. F. Sturtevant Co., Boston.

## Mixers.

Birmingham Iron Foundry, Derby, Ct.  
Farrel Foundry & Mach. Co., Ansonia, Ct.

William R. Thropp, Trenton, N. J.

## Motors (Electric).

B. F. Sturtevant Co., Boston.

## Moulds.

A. Adamson, Akron, Ohio.  
Birmingham Iron Foundry, Derby, Ct.

Hoggson &amp; Pettis Mfg. Co., New Haven, Ct.

## Pillow Blocks.

Holmes Bros., Chicago, Ill.

Farrel Foundry &amp; Mach. Co., Ansonia, Ct.

## Post Hangers.

Farrel Foundry &amp; Mach. Co., Ansonia, Ct.

## Presses (for Rubber Work.)

A. Adamson, Akron, O.  
Birmingham Iron Foundry, Derby, Ct.

Boomer &amp; Boschert Press Co., Syracuse, N. Y.

Edred W. Clark, Hartford, Ct.

Farrel Foundry &amp; Mach. Co., Ansonia, Ct.

William R. Thropp, Trenton, N. J.

## Pumps.

Birmingham Iron Foundry, Derby, Ct.

Boomer &amp; Boschert Press Co., Syracuse, N. Y.

Farrel Foundry &amp; Mach. Co., Ansonia, Ct.

## Racks for Boot and Shoe Cars.

Hoggson &amp; Pettis Mfg. Co., New Haven, Ct.

## Reducing Valves.

Mason Regulator Co., Boston.

## Rollers.

Birmingham Iron Foundry, Derby, Ct.  
Farrel Foundry & Mach. Co., Ansonia, Ct.

Hoggson &amp; Pettis Mfg. Co., New Haven, Ct.

## Rollers (Hand).

Holmes Bros., Chicago, Ill.

## Rubber Covering Machines.

New England Butt Co., Providence, R. I.

## Separators.

Turner, Vaughn &amp; Taylor Co., Cuyahoga Falls, Ohio.

## Shafting.

Birmingham Iron Foundry, Derby, Ct.  
Farrel Foundry & Mach. Co., Ansonia, Ct.

Wellman Sole Cutting Machine Co., Medford, Mass.

## Special Rubber Machinery.

Wellman Sole Cutting Machine Co., Medford, Mass.

## Spreaders.

American Tool &amp; Machine Co., Boston.

Birmingham Iron Foundry, Derby, Ct.

## Spreading Machines.

New England Butt Co., Providence, R. I.

## RUBBER MACHINERY.

## Steam Traps and Specialties.

Jenkins Bros., New York.  
Mason Regulator Co., Boston.  
B. F. Sturtevant Co., Boston.

## Steel Stamps.

Hoggson &amp; Pettis Mfg. Co., New Haven, Ct.

## Stitchers (Hand).

Hoggson &amp; Pettis Mfg. Co., New Haven, Ct.

Holmes Bros., Chicago, Ill.

## Strip Covering Machines.

New England Butt Co., Providence, R. I.

## Strip Cutters.

New England Butt Co., Providence, R. I.

## Thermometers.

Hohmann &amp; Maurer Mfg. Co., Rochester, N. Y.

## Tubing Machines.

A. Adamson, Akron, O.  
Edred W. Clark, Hartford, Ct.  
Holmes Bros., Chicago, Ill.  
John Royle & Sons, Paterson, N. J.

## Vacuum Drying Chambers.

Joseph P. Devine, Buffalo, N. Y.

## Varnishing Machines.

Birmingham Iron Foundry, Derby, Ct.

## Ventilating Fans.

B. F. Sturtevant Co., Boston.

## Vulcanizers.

Birmingham Iron Foundry, Derby, Ct.  
Farrel Foundry & Mach. Co., Ansonia, Ct.

William R. Thropp, Trenton, N. J.

## Washers.

Birmingham Iron Foundry, Derby, Ct.  
Farrel Foundry & Mach. Co., Ansonia, Ct.

William R. Thropp, Trenton, N. J.

Turner, Vaughn &amp; Taylor Co., Cuyahoga Falls, Ohio.

## Wire Insulating Machines.

New England Butt Co., Providence, R. I.

## Wrapping Machines.

A. Adamson, Akron, O.  
Birmingham Iron Foundry, Derby, Ct.SECOND-HAND  
MACHINERY.

W. C. Coleman Co., Setauket, N. Y.

Philip McGrory, Trenton, N. J.

FACTORY  
SUPPLIES

## Acid (Carbolic).

Barrett Mfg. Co., Philadelphia.

## Antimony, Sulphurets of.

GOLDEN.  
Actien-Ges. Georg Egestorff's Salzwerke, Linden, Germany.

Atlas Chemical Co., Newtonville, Mass.

GOLDEN AND CRIMSON.

Joseph Cantor, New York.

Wm. H. Scheel, New York.

Stamford (Conn.) Rubber Supply Co.

Type &amp; King, London, England.

## Balata.

George A. Alden &amp; Co., Boston.

## Benzol.

Barrett Mfg. Co., Philadelphia.

Samuel Cabot, Boston.

## Black Hypo.

Joseph Cantor, New York.

Type &amp; King, London, England.

## Boxes (Wood).

Henry H. Sheip &amp; Co., Philadelphia.

## Brazil Scrap.

Hirsch &amp; Kaiser, Inc., New York.

## Carbon Bisulphide.

George W. Speaight, New York.

## Caustic Soda.

Acker Process Co., Niagara Falls, N. Y.

## Chemicals.

Acker Process Co., Niagara Falls, N. Y.  
Empire Palm Oil Co., Boston.

George W. Speaight, New York.

## Colors.

Joseph Cantor, New York.

Type &amp; King, London, England.

## FACTORY SUPPLIES.

## Crude Rubber.

George A. Alden & Co., Boston.  
A. W. Brunn, New York.  
Hagemeyer & Brunn, New York.  
Hirsch & Kaiser, Inc., New York.  
Rubber Trading Co., New York-Boston.

## Drills.

J. H. Lane &amp; Co., New York.

## Duck (Cotton).

J. H. Lane &amp; Co., New York.

## Fossil Flour.

Fossil Flour Co., New York.

## Gilsonite.

Barber Asphalt Paving Co., Philadelphia.

## Gutta-Percha.

George A. Alden &amp; Co., Boston.

Rubber Trading Co., New York-Boston.

Hose Bands, Straps &amp; Menders.

Boston Woven Hose &amp; Rubber Co.

William Verdon, Fort Plain, N. Y.

Hose Pipes, Nozzles &amp; Couplings.

Boston Woven Hose &amp; Rubber Co.

Eureka Fire Hose Co., New York.

Revere Rubber Co., Boston.

Hydro-Carbon Products.

Geo. A. Alden &amp; Co., Boston.

Infusorial Earth.

Stamford (Conn.) Rubber Supply Co.

Lampblack.

Samuel Cabot, Boston.

Lawn-Hose Supporters.

C. J. Bailey &amp; Co., Boston.

Lead—Blue.

Picher Lead Co., Chicago, Ill.

Lead—Sublimed White.

Picher Lead Co., Chicago, Ill.

Naphtha.

Barrett Mfg. Co., Philadelphia.

Oils.

Akron Commercial Co., Akron, O.

Paris White and Whiting.

H. F. Taintor Mfg. Co., New York.

Reclaimed Rubber.

Bloomington (N. J.) Soft Rubber Co.

E. H. Clapp Rubber Co., Boston, Mass.

New Jersey Rubber Co., Lambertville, N. J.

Pequannoc Rubber Co., Butler, N. J.

Philadelphia Rubber Wks., Philadelphia.

Jos. Stokes Rubber Co., Trenton, N. J.

U. S. Rubber Reclaiming Wks., N. Y.

AGENTS AND DEALERS.

G. Brice, Paris, France.

W. C. Coleman Co., Setauket, N. Y.

Philip McGrory, Trenton, N. J.

H. P. Moorhouse, Paris, France.

Rubber Trading Co., New York-Boston.

Rubber Waste.

Wm. H. Cummings &amp; Sons, New York.

W. C. Coleman Co., Setauket, N. Y.

Hirsch &amp; Kaiser, Inc., New York.

United States Waste Rubber Co., Brockton, Mass.

Scrap Rubber.

Bers &amp; Co., Philadelphia.

W. C. Coleman Co., Setauket, N. Y.

Wm. H. Cummings &amp; Sons, New York.

Theodore Hofeller &amp; Co., Buffalo, N. Y.

Philip McGrory, Trenton, N. J.

M. J. Wolpert, Odessa, Russia.

Substitute.

Bonner Mfg. Co., Boston, Mass.

Empire Palm Oil Co., Boston.

Joseph Cantor, New York.

Massachusetts Chemical Co., Boston.

Wm. H. Scheel, New York.

Stamford (Conn.) Rubber Supply Co.

Type &amp; King, London, England.

Sulphur.

Battelle &amp; Renwick, New York.

T. &amp; S. C. White Co., New York.

Sulphur Chloride.

Acker Process Co., Niagara Falls, N. Y.

George W. Speaight, New York.

Stamford (Conn.) Rubber Supply Co.

Tire Fabrics.

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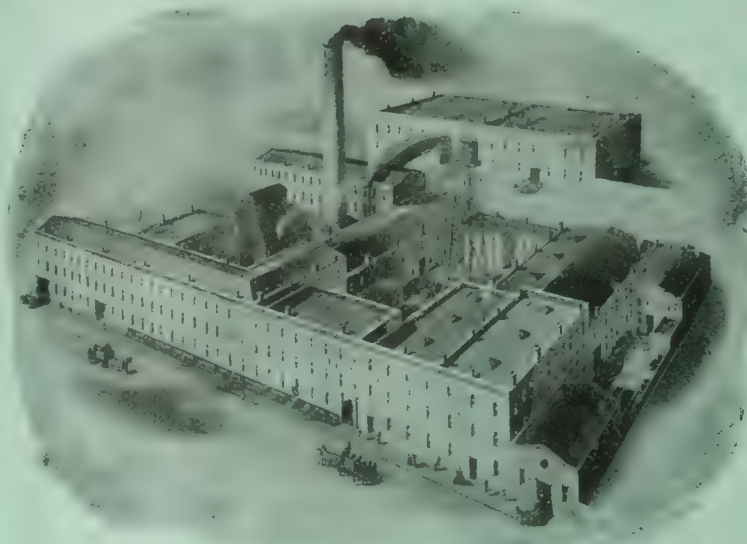


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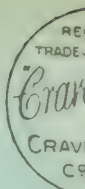
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DECEMBER 1, 1904.

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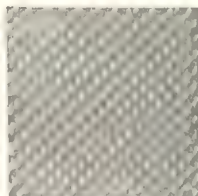
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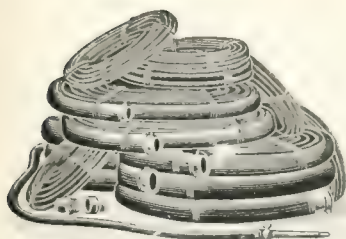
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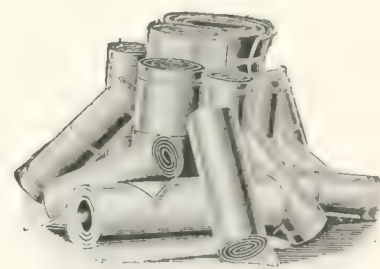
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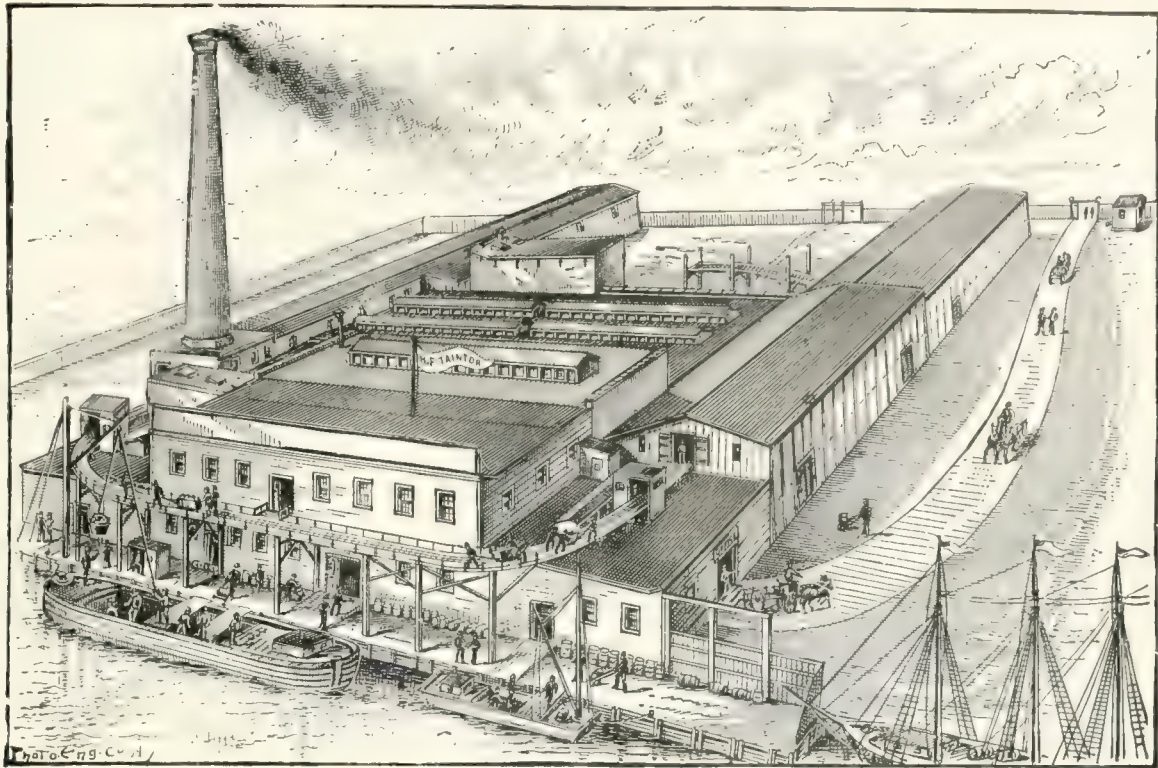


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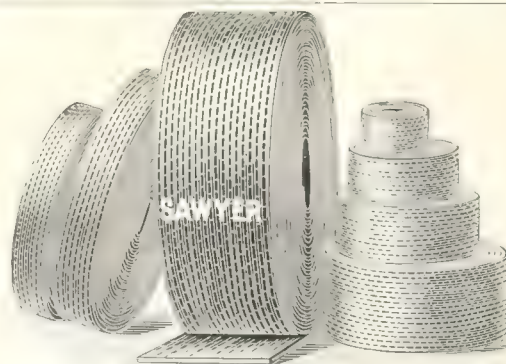
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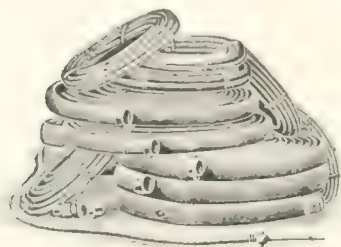
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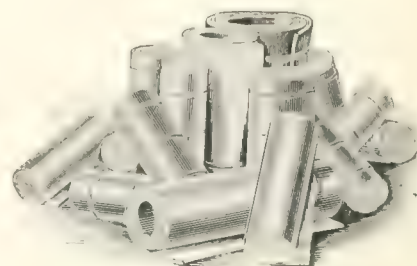
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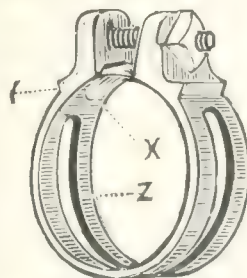
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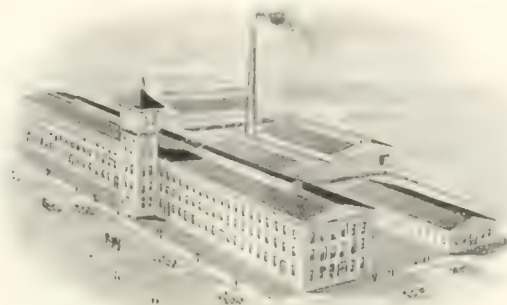
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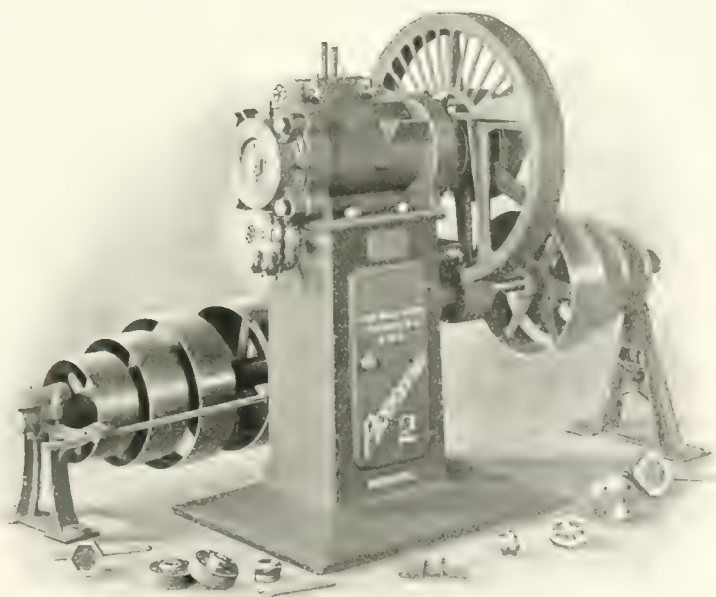
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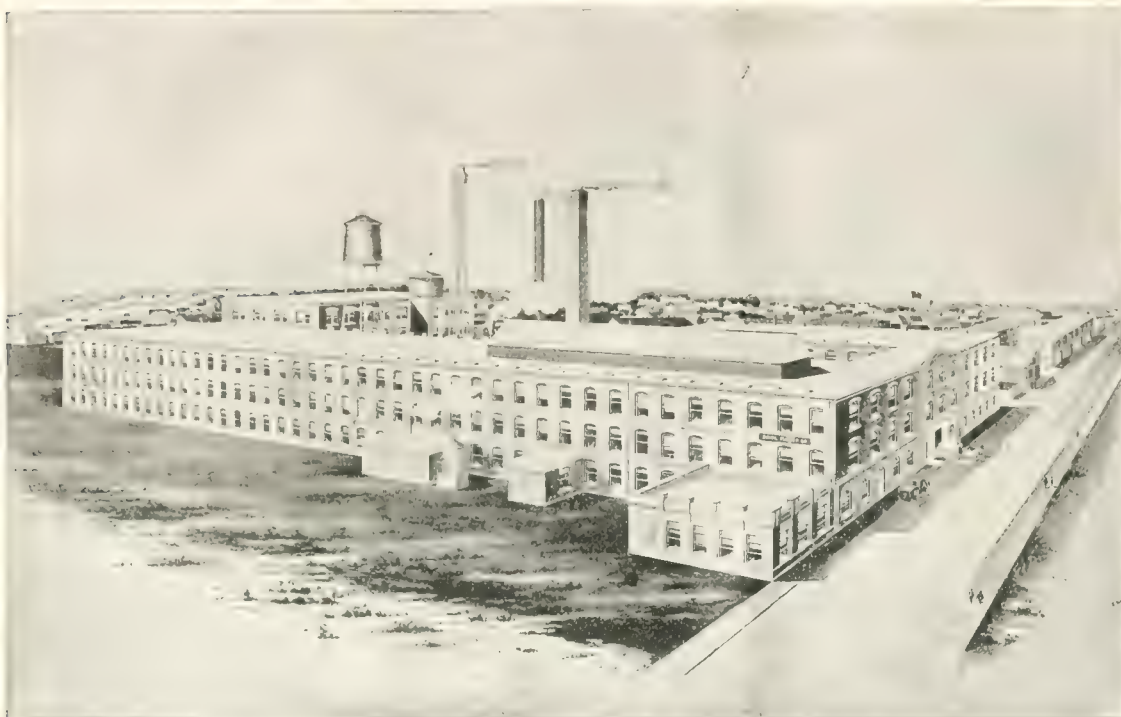
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## THE PRICE OF CRUDE RUBBER.

THERE is no occasion for surprise in the present condition of the crude rubber market. It would be surprising if prices were lower. Nor are the present high prices to be regarded as merely ephemeral; so long as the present active condition of the industry continues, materially lower prices are out of the question. For years THE INDIA RUBBER WORLD has maintained persistently that the prices quoted by manufacturers for their products often were relatively too low, and that a policy ought to be adopted that would render them constantly prepared for an increasing cost of raw materials.

In one sense, the natural supply is as definitely limited as the fortune of an individual; so long as the demands upon that fortune are confined to the income which it produces, its owner may be comfortable, but so soon as larger demands are made upon it, disaster is invited. The natural supply of rubber is never increased, whereas the demand for rubber has increased constantly since Charles Good-year's discovery first rendered the material of practical use to mankind. The result is that the available natural supply of rubber is smaller to-day than ever before, and it must always grow less.

Twenty-five years ago Mr. John H. Cheever, one of the most successful rubber manufacturers the world has known, bought raw rubber as low as the prices appended, in comparison with which we note the highest New York quotations for corresponding grades within the current year:

	1879.	1904.
Fine Pará .....	.50	1.33
Coarse Pará .....	.34	.97
Assam .....	.34	.91
African .....	.24	1.04
Borneo .....	.47½	.41
Mozambique .....	.35	.97

It is not meant by what has been said above that less rubber is produced than formerly; the point to be made that the consumption has increased at a more rapid rate than production, and this has forced up prices. The output of raw rubber from the Amazon valley increased from 17½ million pounds in 1879 to 67 millions in the last crop year, and meanwhile the increase in the African output probably has been as great. But now the limit seems to have been reached in rubber production in many regions, and it is no longer so easy as it once was to find new sources of supplies to take the place of exhausted ones. The extraordinary prices of rubber which have prevailed for some time past have not had the effect of stimulating a larger production on either the Amazon or the Congo, which is the best possible reason for believing that the world's productive capacity in the way of native rubber has been reached.

The demand for rubber, however, never ceases nor becomes diminished; it promises to continue to grow in years to come as it has done in all the years since the first rubber goods were vulcanized. The problem of how best to meet the conditions above outlined, and which must become more acute with the progress of time, is one which calls for managerial ability of the highest order in connection with our rubber factories.



## BOSTON AND PARÁ.

THE secretary of the New England Rubber Club, at the last meeting of that body, at the request of some of its members, laid before it for consideration a matter that is of interest to the trade generally, and for more reasons than one. The matter, in brief, relates to a reported move at Pará, Brazil, to grant a concession for a monopoly of handling all the rubber taxable for export from that port, which would involve of course a certain charge on every kilo of rubber for the benefit of the *cessionnaire*, in addition to the heavy taxes already imposed by the state and the municipality.

The fact is that the rubber producing states on the Amazon live by rubber to a greater extent than any other states in the world live upon a single commodity. A condition which is peculiar to the rubber states, however, is that whereas the trade is organized and carried on by foreign enterprise and with foreign capital, the local governments plan and contrive to place upon the exports all the burdens, in the way of imposts and taxes, "that they will bear," with the idea that, Pará rubber being a necessity to the outside world, the foreigner, who pays the taxes, has no redress.

It is evident from the action of the New England Rubber Club, composed largely of manufacturers, that the time has passed when new burdens can be placed upon the rubber trade without protest. Besides, the members of the Boston organization deal with the matter as American citizens, jealous of any concession that may possibly be granted to persons of other nationalities, empowering them to discriminate against the interests of the United States.

Whether or not anything may result from the rumored proceedings at Pará and the prompt notice of the same by the New England rubber men, the matter still is of interest from a viewpoint apart from anything noted in the preceding paragraphs. It all affords evidence of a growing tendency toward closer relations between the rubber producing and rubber consuming interests. The manufacturer will not always be content to buy his raw material in the nearest market, without giving a thought to trade conditions anterior to that stage. The rubber consumer at Boston or Manchester or Hanover has a very direct interest in whatever relates to the conditions of rubber production and its transmission to market, and the action of the New England Rubber Club may be regarded as the first step in a new policy which, ultimately, will be adopted by important consumers of rubber everywhere; that is, of taking an interest in and declaring themselves in regard to whatever affects general market conditions for rubber, in whatever country, and whether based upon governmental or private initiative.

## REGULATION OF SELLING PRICES.

WE regret that *The India-Rubber Journal* should have construed some remarks in our October issue, headed "A 'Timorous' Association," as an unjustified digression from THE INDIA RUBBER WORLD's rightful field. We beg to extend to our British neighbor the assurances

of our most distinguished consideration, and to state that it is not our desire to attempt in any way to regulate the rubber trade, even at home. Above all things, we desire to avoid "interference in a purely territorial matter," as the *Journal* evidently regards the comments in our October number, which referred to a state of affairs in the *Journal's* country merely as a text for considerations meant to be equally applicable nearer home, where a rubber manufacturer's association has recently taken shape.

The point is this: Is a manufacturers' association to be described as "timorous"—which our dictionaries define as "Fearful; timid; shy; shrinking"—because it fails to accomplish the impossible? What we apprehend to have drawn *The India-Rubber Journal's* criticism of the British manufacturers' association was its failure to do certain things in relation to the regulation of selling prices, and the difficulty of such regulation is due to reasons not affected by territorial limits.

As we remarked in the previous article: "The same conditions exist in England as elsewhere." If A, B, and C consent to any price agreement—whether as to a common fixed price or "a percentage advance on each firm's own prices"—strict compliance with the same may not be possible unless the firms are of like financial strength, or possess business ability in like degree. For which reason we have deemed it the part of wisdom for manufacturers of rubber goods—more than goods of almost any other class—not to deal with price regulation as the chief function of their associations, whether in England, Germany, or America.

As for Tariff and Free Trade in this connection, we had not thought of the matter until it was suggested by our contemporary, in its comments upon our article. Nobody in America thinks of the tariff in connection with the general rubber industry. Rubber goods are included in the United States tariff schedules, it is true, but this fact is perhaps the smallest element in the success of the rubber industry here. We continually import more rubber goods, in certain lines, and our exports of rubber goods are made to Protection and Free Trade countries alike. Of course the tariff question more nearly affects the rubber manufacture in some other countries, but no consideration pertaining to tariffs would, in our opinion, affect the situation which an attempt was made to outline in our former paragraph, beginning "The same conditions obtain in England as elsewhere."

THE RECORD PRICE FOR RAW RUBBER, up to this date, was paid at the London auctions on November 11, for a lot described as "Fine thin Ceylon biscuits, part dark." The price was 5 shillings 9½ pence per pound, equivalent in United States money to \$1.40⅔. It is equivalent also, to 15 francs or 13 marks per kilogram. The highest price reported for regular Pará rubber at the same sale was 5 shillings 1 penny [= \$1.23⅔]. Rubber from the Amazon having advanced materially since the date above mentioned, cultivated rubber from Ceylon and the Straits, if now offered, doubtless would bring more than the figures given. In fact, some Ceylon rubber is known to have been bought in London at private sale, by an American house, at upwards of 6 shillings, and sold for consumption at

an advance. From present indications, rubber prices are likely to become higher before they are permanently lower, and in this connection we may mention that prices for the better grades have already gone beyond the limits of a very comprehensive table recently brought out by a London house, giving equivalent figures in English, American, French, and German money, for comparing market reports on rubber. The table is not applicable to rates higher than \$1.33% and its equivalent in the money of other countries.

A CLOSE STUDY OF THE MANY PATENTS that have been issued in America and abroad for processes for vulcanization reveals very little that is new for the last thirty years; that is, new in principle. There are to-day three lines of practice that are generally followed. The first of these is where live steam is made the vehicle for carrying the heat, commonly known as the "wet heat" cure; the second where dry air or steam heated metal is the heat carrier, known as the "dry heat" cure; and the third where the goods are exposed to the action of chloride of sulphur, known as the "cold" cure. These are all old in principle, although revised and improved from time. It is therefore interesting to note that an entirely new type of cure has been developed in the utilization of electric heat, or the "electric" cure. A superficial examination of the claims that cluster about the process would lead one to prophesy for it a very wide application. Experimentally it is all that could be desired, and if it proves itself commercially it will rank as one of the few departures from the old line practice that rubber manufacture has beheld.

THIS IS THE DATE, according to a report in the *Mexican Herald*, for the resignation to take effect of the Hon. Edward M. Conley, for the past 3½ years vice and deputy consul general of the United States in the City of Mexico. Our readers will remember that Mr. Conley recently distinguished himself by an official report in which he declared the rubber planting business to be based upon fraud. But even if honestly intended, he could see no future for rubber cultivation, in view of the probable production of synthetic rubber. Considering how dark all things appeared to Mr. Conley, there is an element of appropriateness in his choice of a new occupation, which is reported to be the manufacture of wood charcoal.

"RABBIT WEED" HAS BEEN DISCOVERED AGAIN. We do not make this assertion upon our own responsibility, but upon that of Mr. B. F. Spencer, of Denver, who is quoted in the *Santa Fé New Mexican*, of October 21, 1904, as saying: "I discovered this plant at Glorieta [New Mexico] September 7, 1902." We wish that he had recorded also the hour and minute of the great discovery. But this, perhaps, is a detail of less importance than the further announcement by Mr. Spencer: "Later, we expect to erect a factory at or near Santa Fé." In view of the definiteness of this statement, it will hardly be worth while to look for the new factory *earlier*. Of course a rubber factory is referred to, and Mr. Spencer adds: "The rubber trust has offered us 85 cents a pound for our entire output." Not the least interesting point in this connection is that, through Mr. Spencer, our old friend the "rubber trust" has been discovered again.

#### MAKING BLACK SUBSTITUTE.

AMONG the so-called "substitutes" used by the manufacturer of rubber goods are "Black sub," "Corn oil," etc. As one of the titles suggests, it is made from corn oil. Its

manufacture is such a simple matter as to lie easily within the means of factories of ordinary capacity. It is assumed that the factory has the ordinary conveniences, and is piped for illuminating gas, for, in the manufacture of "black sub," great heat is important, and is supplied by gas quickly and economically.

A tank of boiler iron should be provided, cylindrical in shape, capable of holding one or more barrels of corn oil, and placed so it may be filled at its top. Such a tank, located in the factory basement, could be filled from barrels on the main floor with little trouble or waste, by placing the tank immediately beneath the floor which had been provided with a small hatchway or trapdoor. Tank should be provided with faucet for drawing off oil as required, or it may be piped directly to the kettle for boiling. Gas jets should be arranged around the base of this tank so its contents can be heated in advance of use. This is simply economy in time. Within convenient distance of the tank should be another cluster or circle of gas jets in a chamber shut in at the sides, open at the top, properly constructed and of a strength to sustain a kettle having a capacity of 8 gallons.

Still another cluster of gas jets should be provided over which sulphur can be melted. Also a cooling box, 2 × 3 × 5 feet, constructed of wood. The apparatus now consists of a boiler iron tank for holding the supply of corn oil, a heater for boiling the oil, a heater for melting sulphur, and a cooling box.

Two strong men are required to handle the work properly. Eight gallons of corn oil are drawn from the tank, and 20¼ pounds of sulphur weighed into a large dipper, and each placed over its respective heater. The oil having been previously heated, attains the boiling point quickly, and for 30 minutes should be kept at a temperature of 470° F., and constantly stirred. The sulphur, being now melted, is added to the boiling corn oil. It must be added hot to prevent crystallization. The workmen must be prepared for prompt and skilful action at this point, for no sooner does the sulphur mix with the boiling oil than the contents of the kettle rise rapidly, and before it can boil over must be removed and emptied into the cooling box where it may be stirred. When cold it is dumped upon and tied up in large cloths, or placed in pans ready for use, as convenience or necessity suggest.

In this manner black substitute is manufactured.

The boiling will reduce the quantity somewhat, say 2 per cent., and from a weight of 69¼ pounds material, a batch should result weighing about 68 pounds. The cost of such a quantity is as follows:

Corn oil—8 gallons (49 pounds).....	\$1.52
Sulphur 20¼ pounds .....	.51
Labor—two men 1½ hour.....	.15
Gas—at \$1 per 1000 feet.....	.05
Total.....	\$2.23
Or, say .0328 cents per pound.	

The cost of gas was taken during production of 2074 pounds, 1300 feet being consumed. It will be noted that something over 41 per cent. of sulphur is required to make this substitute, while to oxidize cotton seed oil or rape seed oil requires but 26 per cent. A recipe which has been given for making substitute from rape seed oil is as follows:

Rape seed oil.....	¼ gallon.
Benzine .....	1 gallon.
Sulphuric acid .....	14 ounces.
Magnesia .....	½ ounce.

J. W. C.

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## NEW TRADE PUBLICATIONS.

**TYER RUBBER CO.** (Andover, Massachusetts) have issued under a 1904 copyright a new edition of their very complete illustrated catalogue and price list of Druggists' Sundries and Miscellaneous Rubber Goods, which was mentioned first in *THE INDIA RUBBER WORLD* November 1, 1902 (page 54). The arrangement of the catalogue remains the same, which will commend itself to those users of it who have become accustomed to its make-up, but there are apparent various changes in the list of goods, indicating the tendency of the company to make its products conform to the changing demands of the trade. Some of the new items listed are dental dam, hospital blankets, and veterinary syringes. The illustrations in this book are admirably executed, color printing being introduced effectively to give an adequate idea of the appearance of the goods described. [10" × 7½". 112 pages.]

**THE HOHMANN & MAURER MANUFACTURING CO.** (Rochester, New York) issue a brochure, "The Making of Thermometers," with illustrations of various processes in this industry, which cannot fail to prove of interest to the practical rubber man, in whose work so much depends upon the proper registering and indication of differences of temperature. The making of a really accurate thermometer is shown to require the greatest nicety of work, and it is due to such work that the instruments manufactured by this firm have attained so high a reputation. [5½" × 7". 11 pages.]—The same firm send us also an illustrated catalogue of Long Stem Thermometers, adapted to use in various industries, including the leading branches of the rubber manufacture, and especially in connection with vulcanizers of different types. Incidentally this book, also, contains not a little matter of interest regarding the requisites of a high grade thermometer and the means employed in the production of such interests. [6¾" × 10¾". 42 pages.]

**CONTINENTAL RUBBER WORKS** (Erie, Pennsylvania) issue an illustrated priced list of Mechanical Rubber Goods and Plumbers' Supplies, embracing a wide variety of molded work, much of which is special with the company. It is an exceedingly neat catalogue. [5½" × 8". 19 pages.]

**THE GUTTA PERCHA AND RUBBER MANUFACTURING CO. OF TORONTO, LIMITED**, issue an illustrated price list of Yachting, Tennis, Lacrosse, and Vacation Shoes. The illustrations indicate that a handsome line of goods is being produced. [3½" × 6¼". 10 pages.]

**MILLER BROTHERS** (Baltimore, Maryland) issue an illustrated Net Price List for 1904-05 of an extensive line of Druggists' Sundries and Rubber Specialties, of which they are jobbers on a large scale. A further reference to the firm appears in the news columns of this paper. [6" × 9¼". 48 pages.]

**PIRELLI & CO.** (Milan, Italy) issue in pamphlet form some "Notes Upon the Industry and Works" of that company, in connection with their exhibit at the St. Louis Exposition, recording the development of the business from its foundation in 1872 by Signor G. B. Pirelli, and giving views of the various plants of the company in Italy and Spain. In addition to the general manufacture of rubber goods the company have manufactured and laid submarine cables to the length of 2534 kilometers (=1571 miles). [8½" × 11¾". 22 pages.]

**ETABLISSEMENTS INDUSTRIELS E. C. GRAMMONT**—Alexandre Grammont, Successeur (Pont-de-Chéruy, France), issue a general catalogue of insulated wires and cables, with references to the general manufacture of rubber goods at the same works. [8¾" × 10¼". 32 pages.]—Also, a special Report descriptive of their factories and products, of which copies in

French, English, and other languages have been received. [8¼" × 10¾". 15 pages.]

**TEXTILE MACHINE WORKS**—Thun & Janssen (Reading, Pennsylvania) issue a very complete and well got up illustrated catalogue of Braiding Machines for all purposes, including a number which appear to be adapted to the various branches of the rubber and electrical industries. [6" × 9¼". 78 pages.]

ALSO RECEIVED.

**WOVEN Wire Rubber Co.**, New York.=The Horseshoe Problem. 8 pages.

**I. B. Kleinert Rubber Co.**, New York.=The Dress Shield Book. [With 21 illustrations of different styles and brands.] 24 pages.

**The Republic Rubber Co.**, Youngstown, Ohio.=Republic Tires. 14 pages.

**The Peter Union Tyre Co.** (Mitteldeutsche Gummiwaaren-Fabrik, Louis Peter), Frankfort o/M., Germany=[Peter's patent rim and tires.] 4 pages.

**The Continental Caoutchouc and Gutta Percha Co.**, London Branch =The Gordon Bennett Race, 1903. [Relates to the success in this race of the "Continental" tires.] 37 pages.

**The Goodyear Tire and Rubber Co.**, Akron, Ohio=Catalogue C 41. Carriage tires, tire machines, channel steel, wire and supplies. 32 pages.

**H. D. Weed**, Canastota, New York.=Weed's Chain Tire Grip. 8 pages.

## MR. CUDAHY'S COMPANY OUT OF DOORS.

A NEW YORK firm of brokers advise *THE INDIA RUBBER WORLD*: "There has been trading on the Curb in the shares of the Two Republics Chartered Co. at around 58. This trading has been small, however, amounting to two or three hundred shares a day, between Curb brokers who do not give up their principals. We understand that the company's office is at No. 52 Broadway, and beyond this we know nothing in regard to the concern." The concern referred to is the latest successor to the International Rubber and Trading Co., which, in turn, succeeded the Para Rubber Plantation Co.—John Cudahy, president—to which this Journal has devoted considerable space hitherto. Trading on "the Curb" takes place in the street, in front of the New York Stock Exchange, in shares not recognized on the Exchange. The company's activity apparently is still confined to trading in shares, instead of trading in rubber.

## SOME WANTS OF THE RUBBER TRADE.

[299] A CORRESPONDENT at Buffalo, New York, desires "the address of manufacturers of weaving or knitting machinery for weaving or knitting fabric for hose and belting—hose for steam, air brake, or fire engine purposes."

[300] A correspondent at Dayton, Kentucky, desires "the address of the owner of the Hulbert pillow ventilator."

[301] A correspondent at Greensboro, North Carolina, desires "the address of the concern which makes the 'Bedelia' rubber balls, that you press and a stocking comes out; also the manufacturer of the little rubber snakes."

[302] A correspondent at Cincinnati, Ohio, desires to know who supplies "a new article which is now on the market, in the shape of a rubber razor wipe that is used by barbers in taking lather from the razors."

[303] A correspondent at Toledo, Ohio, writes: "Will you kindly inform us where we can get Gutta-percha in sheets?"

[304] A correspondent at Trenton, New Jersey, inquires for the address of "any one who manufactures powder mixing machines, for mixing together the dry compounds, for compounding with rubber."

## EXPLORING FOR "CASTILLOA" RUBBER IN PANAMA.

*Experiences of The Editor of "The India Rubber World."*

## FIRST LETTER.

To Panama in the Rainy Season.—Fortune Island.—Colon.—Along the Panama Canal.—Panama City.—The *Almirante*.—Toboga Island.—Queer Fish.—Sleeping in the Rain.—The Quebro Outlaws.—*El Capitan's* Fears.—Almost Wrecked.—In the Lee of Gobernador.—The "Pioneer" Comes Aboard.—Ashore at Last.

**I**T was decidedly against my better judgment that I found myself *en route* for Central America in May, and due to reach the infant republic of Panama during the rainy season, and when yellow fever might be too easy of acquisition. Nevertheless, there I was, passenger on the *Allianca*, with two fellow adventurers, while a third was waiting our arrival in Panama city. The exploring party consisted of four—the "Prospector," a well known mining engineer; the "Scout," then in Panama, getting together supplies, engaging guides, and chartering a schooner; the "Commodore," and the writer. My task was the examination of some 800 square miles of wild lands, privately owned and long forgotten.

The voyage to Colon was uneventful, but enjoyable, although it grew warmer each day, and side awnings and wind scoops told of increasing nearness to the tropics. In due time Bird Island rock was sighted, where is a lighthouse, flagstaff, and thirteen cocoanut palms, but no sign of life on the dazzling white beaches. Later came Fortune island and, stopping far off shore, the one white resident came off to us in a jolly boat rowed by a half dozen husky negroes and got his mail. Although the sea was smooth as glass, of a wonderful indescribable blue, and the little cluster of houses in the distance in a setting of graceful palms, with foreground of snowwhite beaches, was most beautiful, the heat was killing and we were glad when the steamer left it all behind. Later the light on Cape Maisi, Cuba, was raised, and then came the boisterous and lonely Caribbean sea. Heavy thunder storms soon became frequent, and the heat during the day was intense, but the nights, as the moon was full, were glorious. Finally, on the last day of May, at 11 in the morning, we sighted the rugged coast of Colombia, shadowed by masses of deep cloud, and not long after were in Colon.

Although soon transferred to the train that crosses the Isth-

mus, we had a chance to see the building where 24 United States marines stood off 400 Columbian regulars, to take in the negro huts that cluster about the town in every swampy spot, and to size up the small, scraggy horses, the parrots, monkeys, and a good percentage of Colon's 2000 inhabitants.

The afternoon train scheduled to leave at 2.45 gets away promptly at 3.30. Almost at once the journey is made interesting by the relics of the French canal diggers, and such relics! Trains of cars abandoned, overgrown with vines, trees, and lusty weeds; mountains of corroding iron pipe, hundreds of tons of rusty rails, donkey engines, locomotives, dredges—all crumbling, rotting, sinking out of sight in the slime, or covered by the rank swamp growths. Further on were huge warehouses, said to be full of expensive machinery, and then the chateaus of the French engineers, once trig and neat, now tawdry, desolate, deserted. We saw the Chagres river, and very harmless and muddy it looked; observed Monkey Hill cemetery, and wondered why the French engineers elected to live in a swamp and be buried on a hill; admired the fine work done in excavating the Culebra cut; took note of the types of jungle growth, and at 6 in the evening arrived at the city of Panama, were met by the Scout, and at once taken to the Hotel Grand Central.

Here was a deadly, sticky, oppressive heat, with not a breath of air stirring. The bare bedrooms were like ovens, and even the cone of mosquito netting that hung over the bed was to the imagination as stifling as a blanket. It was too hot to think of sleep, so we wandered about the city, interested, amused, and disgusted—interested by the quaint and ancient architecture, amused by the police custom of blowing whistles in concert when the clocks struck the hour, disgusted by the smells that many side streets developed.

The next morning after coffee we went down to the water front, where, lying high and dry on the beach, as the tide was out, was the *Almirante*, the 60 ton schooner that was to take us to our destination. The crew of five negroes, headed by the Mate, were slowly getting our outfit aboard, and at the same time chaffing the crews of nearby hog schooners that were un-



IN THE CANAL ZONE. RIVER VIEW.



CATHEDRAL SQUARE AND HOTEL GRAND CENTRAL, PANAMA CITY



loading by pushing their squealing freight into the water to swim ashore as best it could.

From here we went to Don Pablo's offices to discuss food, medicines, hammocks, ammunition, clothing, etc., until it was time for noon breakfast and the regulation *siesta*. Just a word about Don Pablo. One of the wealthy and progressive merchants of the new republic, he not only treated us with every consideration, and purchased most of our supplies, but it was due to his alert helpfulness that we were not tied up on that torrid city for a week or more, instead of getting away in three days. But to return to our story. The breakfast was not a success from an epicurean standpoint, nor was the *siesta*, for it was too hot to sleep. So, assembling in the foyer, we watched the drowsy darkeys on the curbs opposite, and waited for the midday heat to pass. After a time I was courageous enough to look at the thermometer and it registered 97° F., the air fairly reeking with humidity. Along in the afternoon I wrote some letters, but could get no stamps, as the government had interdicted their sale at hotels, because the tourists had been in the habit of buying them for curios, instead of attaching them to letters as they should; at least that is what the clerk said.

Finally, on the afternoon of the third day in Panama, all was ready. The *Almirante* lay about a mile from shore. There is a 20 foot tide, so it is said, and the row to the schooner gave us a view of many cattle and hog boats, and a good idea of the water front of the quaint city that stands at the Pacific entrance of the canal. I have said that the crew consisted of five, but neglected

to mention the crew's cook, Jungo, and also our own, Raphael. I had also forgotten the dozen live hens that were tied two and two, and wandered over the deck at will, as well as Domingo, the leanest, dirtiest, tiniest tramp kitten that any country every saw.

Don Pablo and Don Raimon (another friend) came out and saw us off, and by 7 o'clock we were sailing out of the harbor, headed for Toboga island for ballast and fresh water. All trace of the deadly heat ashore was gone, and the effects, a slight fever that all experienced, quickly disappeared. When darkness came, we slept on deck under the stars wrapped in blankets, and awoke in the morning to find the boat at anchor just off the little town of Toboga. It was raining gently, but no one cared, and after coffee we went ashore to buy eggs, pineapples, and bananas, and incidentally to get a shore breakfast. This was served in a neat room by pretty Indian girls, and was the best meal we had eaten for a week.

The town has about 100 dwellings of bamboo, plastered with cow dung, and a small church. It is nestled at the foot of a high ridge, cultivated almost to the top, while about the houses cluster coconut palms, and pawpaw and chicle trees. It is a very healthy place, as the water is good and there are no mosquitoes. Late in the afternoon we got away, but as the wind was light, did little but drift. Then it was that we began to speculate upon the number of days it would take to reach our destination, and to recall the fact that in these same waters Cortez once lay becalmed for seventy days, and at this season of the year, too.



PANAMANIANS.



THE SCHOONER "ALMIRANTE."



ON THE BEACH. GUBERNADOR ISLAND.

The next morning we were still in sight of Toboga, and spent much of the day in rifle and revolver practice, the gulls on bits of driftwood making capital targets. There was also the chance to size up *El Capitan*, a nervous, wiry native Panamanian, and to discover the very primitive ideas of cleanliness that our cook was possessed of. For example, his plan for cleansing the tin coffee cups was to pour one half full of water, rinse it around, pour the same water into another, and so on until all were thus washed. He also had a barrel of "biltong" or pickled beef for the crew, that was washed each day and hung on a line to dry. It certainly was strong meat, and the smell of it aft came near making us all vegetarians. Slowly the boat drew on, the passengers killing time as best they could, till finally Punta Malo came in sight. It was at this time that our first use for the medicine chest occurred. The Commodore rolled his sleeves high to the tropical sun and in a few hours had a pair of the reddest, sorest arms that were ever seen. They gave out heat like base burners, and ached if one pointed at them, so they were anointed with cooling salves, hung in slings, and nearly cured by the time he got ashore.



JUNGO, COOK ON THE "ALMIRANTE."

And so we sailed and drifted, chiefly the latter, sleeping on deck until driven into the little cabin by an unusually heavy shower, usually to be driven out again by the heat, the bilge smell, and the ants, of which latter we had our own private colony. After a time we left Panama bay and felt the long swell of the Pacific. Then was sighted Punta Moro Puercos (Cape The-Death-of-the-Pig), and after that came a coast—rugged, mountainous, with no harbors, and the mountains shadowed by dense clouds, with all the evidences of continuous and heavy tropical rainstorms.

After more drifting came Punta Marieto, which we rounded, and, turning due north, made for the Gulf of Montijo, where the schooner was to lie while the exploring party was ashore. Even after rounding the cape the wind still continued light, and progress came chiefly from the impulse of the Pacific swell.

In these waters were many sharks, two of which carry a half dozen bullets apiece which I pumped into them from a Remington repeater early one morning. Then too, there was a

water snake, *Culebra marina*, about three feet long, that was often in evidence, sometimes as many as thirty being seen in a day. We fished constantly, but got no bites, but the crew speared some fish of a kind new to me. One, long and slim, resembling a mackerel, was of a beautiful bronze tint, with a spike on its nose, and a back fin running from the gills to the tail. Another short, chunky, of a dingy blue color spotted with white polka dots. The natives called the former the "durado," but had no name for the latter.

Our drifting by the point did not last long, as the weather suddenly changed and the wind became so squally that the captain put out to sea lest he pile his vessel upon the inhospitable shore. That night I tried to sleep in the cabin but it was too disagreeable, so I put on a light rubber coat and rubber boots and slept soundly on deck with the rain beating in my face. It was so scorching hot in the daytime that when drifting a tarpaulin was rigged as a shield under which were swung the hammocks, making quarters that were fairly comfortable. Some one called it the "Touraine," because when it was half done it began to rain.



"THE TOURAINE"—CANVAS SHELTER ON THE "ALMIRANTE."

Soon the schooner was off the Quebro, a part of the territory said to contain a large settlement of outlaws. These fugitives from justice had heard of the approach of the *Americanos* and were rumored to be prepared to resist any examination of that part of the land. If they believed the stories told them by the Indians, that they were to be enslaved and have numbers branded upon their foreheads, one can scarcely blame them.

The objective point, however, was farther down the coast, so we only saw the mouth of the Quebro river, with frowning mountains for a background. Very glad we were that the Quebro was not then in our itinerary, for that part of the country was black with thunder clouds and drenched with showers that bore a close resemblance to cloudbursts.

Coasting along still further we descried the mouth of the Marieto river, where the first landing was to be made. Here a fresh difficulty arose. *El Capitan* feared the shore and would not go nearer than five miles without a pilot. After a lurid conference, in Spanish, Portuguese, and English, it was



suggested that he circle the nearby island of Cebaco, stop at Gubernador island and borrow a pilot. And so it was decided, and the start made just as night fell.

That night the air was heavy with moisture and had in it all of the makings of an electrical storm of great violence, but aside from the St. Elmo's fire that appeared at the mast head nothing happened. The crew were much exercised about these strange balls of light—it was *Malo* with a capital M to all of them. No such superstition affected our party, however, and when the morning came we laughed away their fears, and as

the day advanced they grew ashamed of the terrors of the night. By noon the schooner was off Cebaco, which ends in a jagged reef where rough water is to be found. As the wind was light and the current strong, the *Almirante* was carried quite close to this danger point, although both jibs and the fore and mainsail were drawing full,

the two latter being wing and wing. Just as we passed the reef, with no warning at all, came a squall that was as near as possible to ending the cruise in disaster. The *Almirante* heeled over until her rail was under, and plunged forward like a race horse. *El Capitan*, at the tiller ropes, screeched shrill orders, and the crew worked like demons to get the flying jib and the foresail down. In the face of that wind it was no mean job, as the sail was as rigid as iron and it was not until a sailor climbed the mast and pulled the hoops down, a few inches at a time, that it was lowered. Even then it could not be tied up, but bellied far out into the water. The same difficulty was experienced in reefing the mainsail. But finally, after much labor, the schooner was got in hand and was driving out to sea under jib and reefed mainsail. As the squall had now turned into a hurricane that drove the warm spray from the wave tops into one's face like hail, it looked as if we were likely to be driven far out of our course. *El Capitan* therefore decided to try to come about and run between Cebaco and Gubernador for shelter. Three times he tried and each time missed. Then he prepared to jibe. The *Americanos*, however, would not have it, urging that either the rigging would part or the masts be carried away by such a measure, and he finally gave it up. Then he tried to come about again, and by lowering the jib for a moment, and raising it again, was successful; the old tub came about and headed for the haven. Then came three hours of as rough sailing as I ever expect to see. There was no particular danger, if everything held, but the seas that pounded the side and often came aboard were big and angry, and the wind fairly shrieked. Nothing happened except the parting of a stay, and the partial collapse of the cook's galley, and by nightfall anchor was dropped close under the shelter of

Gubernador, in still water, and the weary voyagers went to sleep to the roaring of the breakers on the other side of the island.

Going ashore in the morning we found that the island was owned by our friend Don Pablo, and it was here that his pearl fishing schooners refitted. The few inhabitants were Indian, and in looks, habits, and manner of living just what one finds from Mexico all the way down to the Amazon. They were friendly and brought us pineapples that were most delicious, and, after much palaver, secured a pilot. It was while walking along the shore from one little settlement to another that the Scout, with whom I was, had an unpleasant experience. We were under a tree that looked for all the world in bark and leaf like a pear tree, with a fruit that had the appearance of a small apple. We each picked half a dozen, and the Scout bit into one, remarking that it tasted like a sweet apple. I used mine, however, to pelt the native dogs that were following, and then both forgot the episode. After the return to the schooner, however, while getting under way, the Scout was taken suddenly ill, vomiting, retching, and complaining that he felt as if he were on fire inside. We gave him such simple remedies as were obtainable, but it was some hours before the attack passed off. The natives said later that both tree and fruit, known as the bitter *mansana*, or arsenic apple, are intensely poisonous. A horse tied under the tree for a few hours becomes very ill and loses its hair, while it is sure death for a man to eat one of the apples.

With the pilot aboard we soon gained the gulf again and ere long were off the Palo Secco (the withered tree) where, if luck favored, guides and mules were awaiting us. This time our captain ventured within three miles of the shore and sure enough saw two men. A boat was sent and, in course of time, night having fallen, a light appeared dancing over the waves, and soon there stepped aboard the Pioneer, who was to furnish guides and transport. He had been waiting nearly a week and would have left the next day believing that we had turned back or been wrecked by one of the Pacific hurricanes.

The Pioneer had been in that country for many years and his stories of rubber gathering up in the Cauca, and adventures in the Darien with the fierce San Blas Indians, were most interesting. As is well known, these savages do not allow trespassers upon their lands although they do not molest those who gather rubber in the wilds adjacent to their domain. The Pioneer acknowledged that he once broke an agreement with a chief, stole across the river that marked his boundary, and began work on the rich forbidden forest. As a result his men



PART OF THE PANAMANIAN ARMY.



CAMP RIO NEGRO (TO BE DESCRIBED LATER).

were shot down, one by one, until only he and one negro escaped.

Another time he was caught far up a river by the dry season, and had to wait for the rains. When they finally came and he got his rubber afloat, they had for provision only rice and bananas. Floating down the river one evening in the bright moonlight they came to a fine stretch of beach, and he at once ordered the canoe men to make camp there. They refused, with every evidence of extreme terror, as they said the place was haunted. The Pioneer, tired and hungry, forced them to do as he ordered by threatening them with his revolver, and soon had supper and was quickly sound asleep under his mosquito netting. About midnight, just as the moon was setting, he was awakened by a strange and dreadful cry. Sitting up to call the crew they suddenly threw themselves upon him, held him down, and practically gagging him kept him quiet until the screams ceased. Then they whispered that it was death to speak aloud and returned to their sleeping places. The next morning they explained that the screams came from the spirit of a man who was murdered and buried with money on him, and if any one had spoken the spirit would have at once attacked and killed the speaker. No whit impressed, the Pioneer searched the river bank and finally found a huge and ancient sloth which he promptly killed. And thus was the uneasy spirit laid, for the cries ceased from that time.

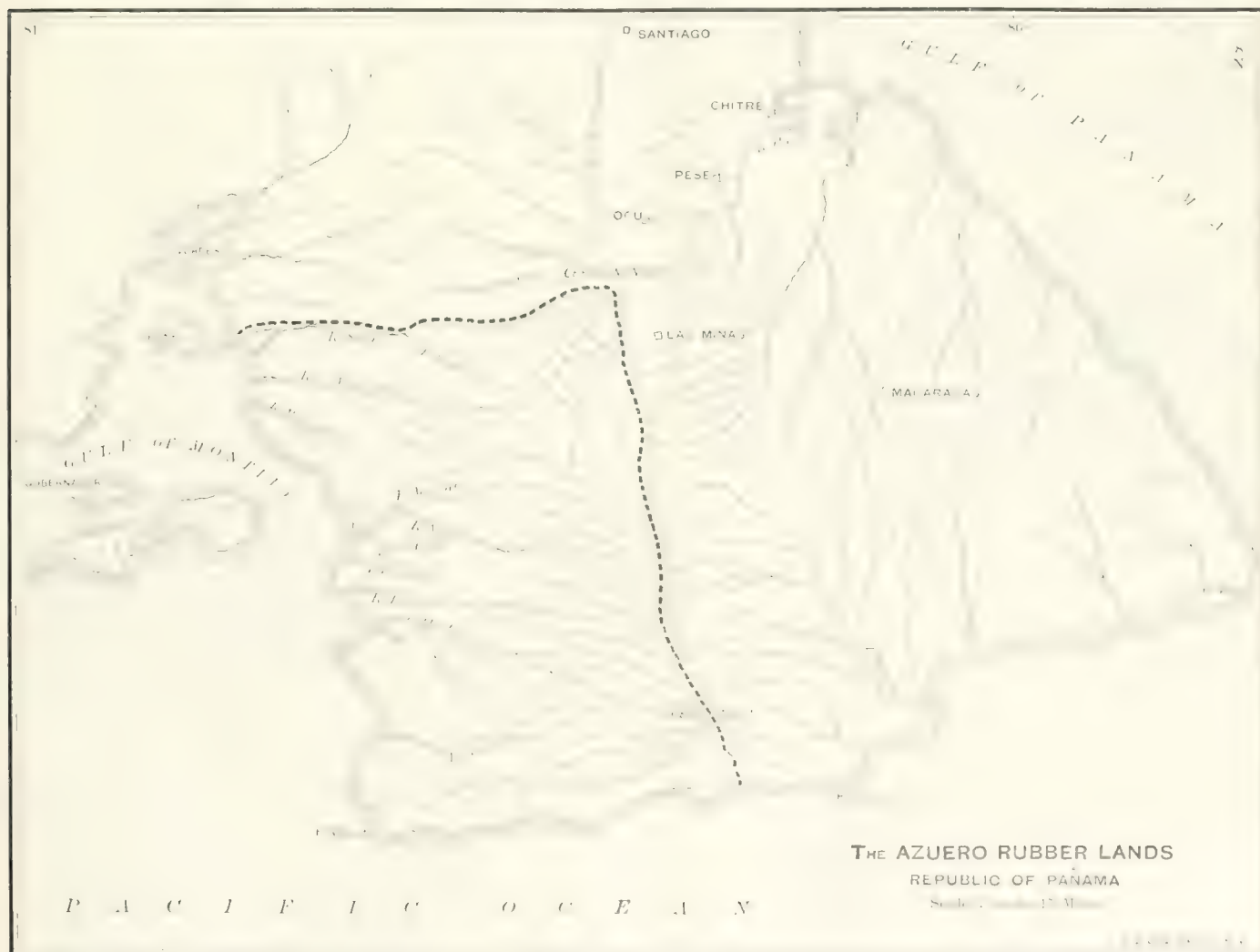
The rubber trees up there, so he said, were from two to three feet in diameter and most abundant bleeders. They always

cut them down to secure the rubber, as they get more that way and know that if they spared them the next crew of gatherers would destroy them. He said that on the land we had come to examine the rubber gatherers had been in the habit of cutting the trees down, but that two years before the practice had been stopped, and a premium of \$25 paid to any one who informed of such destruction. As the whole tract, some 500,000 acres, was private property, and wild, and as most of the Indians lived on the other side of the mountains, the rubber was quite plentiful and with a very little system the crop could be greatly augmented.

The next day was undertaken in good earnest the work of getting our stores and ourselves safely ashore. And no light task we found it. The surf was tremendous and it was impossible even with the skilful management to get to land without being drenched. The men were landed in the ship's boat, while the stores came ashore in a dugout.

While the goods were being landed the Scout and the Prospector stripped and took a bath. Later they shuddered when they remembered it, for the sharks that haunt that shore, coming far into the shallow water, are big and voracious. In the meantime I was looking at the forest. Much to my delight I found *Castilloa* trees growing within 100 feet of the shore. Small ones to be sure, but thrifty. One about three inches in diameter had been tapped, and from the cuts I stripped some good strong rubber.

[TO BE CONTINUED.]





## NEW FEATURES IN TIRE CONSTRUCTION.

## THE REPUBLIC RUBBER CO.'S NEW TIRE.

**A** NEW side wire tire which for some time has been under severe tests, which have proved highly satisfactory, will be placed upon the market soon, it is announced, by the Republic Rubber Co. (Youngstown, Ohio). There are some special features embodied which have never heretofore been used, and which after considerable experimenting, have developed a degree of promise very encouraging to the manufacturers.

There are no cross wires or holes in the tire itself to cut out. It is all rubber. The chief point in the attachment of the tire relates to the metal plates or bands passing underneath the tire, and under the retaining wires at the side, thereby forming a "clincher" base.

In cushion rubber tires for vehicles, having retaining wires for securing the elastic body in the rim, it has heretofore been common practice to embed in or extend through the rubber

so the band support need not be embedded in the rubber or extend there through.

The invention also designs to provide improved supports for the retaining wires, which do not affect the resiliency of the tire, and further, to provide a cushion tire embodying an improved construction. This tire will be marketed in sizes 1½ inch and larger. It is the subject of United States patent No. 755,259, dated March 22, 1904.

## THE G &amp; J THREAD FABRIC TIRE.

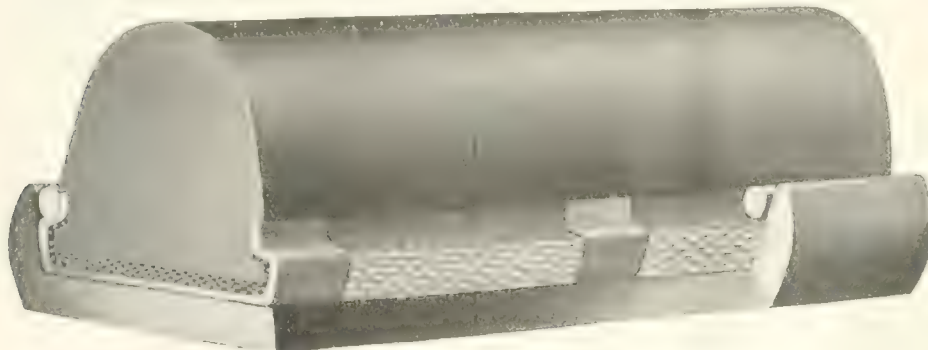
As a result of an exhaustive series of tests, relating to the construction of automobile tires, the G & J Tire Co. (Indianapolis, Indiana) have introduced what they call their Thread Fabric tire, an important feature of which is the substitution of a special thread fabric for the close, square woven cloth formerly used. The term "square woven" is used to describe the special weave—the feature of the cloth being that the fill threads were of the same number, size, and strength as the warp threads. Thus the cloth was as strong one way as the other; hence the term "square woven."

The effective strength of the fabric entering into the construction of a tire does not depend entirely upon its tensile strength, according to the inventor of this new process, but in a large degree upon the method used in construction, which determines whether or not the entire strength of the fabric has been used to the best possible advantage. This should be reckoned on the basis of the work performed by each

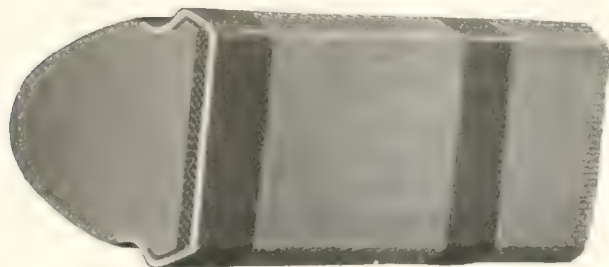
separate thread used in the construction of the tire.

In the new thread tire, the fabric is so placed and controlled that each and every thread is used to the best possible advantage; while in a tire made of square woven cloth it may be impossible to place each separate thread in the proper position to accomplish the best results, owing to the fact that the threads in such fabric cross and recross each other, one over and one under the other. In the necessary operations in the factory to prepare the square woven cloth for the actual making of the tire, one set of threads is drawn to the utmost tension, while the others, or cross threads, are left in their normal condition. Thus when a tire constructed with square woven cloth is inflated and the individual threads are put to the

greatest tension, the natural tendency is for the threads to form as near a straight line as possible, and in consequence great pressure is exerted at the point of contact where the threads cross each other. When the bias fabric changes its position, as it must when the tire is in service, and sets up a chafing action between the fill and cross threads, the result is that the individual threads of the tire are destroyed, not by pressure, but by the chafing action of one thread against the other, which action is continuous while the tire is in service.



REPUBLIC RUBBER CO.'S TIRE, SEATED IN THE CHANNEL.



POSITION OF THE PLATES ON THE BASE.

metallic supports or cross wires for the retaining wires. In practice it has been found difficult to construct a rubber tire with the supports embedded therein, and the cost of manufacture thereof was materially increased by the process necessarily adopted in such manufacture, and on account of the care necessary in accurately laying the supports in the rubber. In some instances, the elastic body was formed of parts separately formed and vulcanized together with the supports there between. Tires having metallic supports or cross wires in the rubber are also objectionable, because the resiliency of the tire is lessened by the metallic supports, and because they are destructive to the rubber when the tire is in use, and often become loose, and cut and abrade the rubber, thus lessening the durability of the tire.

The present invention designs to overcome these objections and to provide metallic supports for the retaining wires, which are securely held in proper position with respect to the elastic body, but do not extend through the rubber or body of the tire,



G &amp; J TIRE SECTION.

Molded in circular shape, so as to place the least possible strain upon the fabric of the side walls.

Not only does this chafing action affect the threads of the tire, but it also generates an internal frictional heat. The constant subjection of the rubber and fabric to heat has a deteriorating effect on the tire.

A tire made of square woven cloth is subject to damage by any moisture which can get to the cloth by reason of a cut in the outer rubber cover, or otherwise, and as each thread in each layer of the cloth comes in contact with the other, the whole of that layer may be affected by the moisture, as the capillary attraction will allow the wet or moisture to travel the

ber to the fabric, and at the same time, the fabric changing position has a tendency to destroy or break the rubber rivet. The action is really an opening and closing one, which not only cuts off the rivet, but injures the fabric at the same time, and when once these rivets begin to let loose, the adhesive power is lessened, and the layers of fabric, or as it may be, the outside cover begins to let loose. This action materially assists the chafing action, already described, to set up a frictional action, which is indicated by the internal heat of the tire.

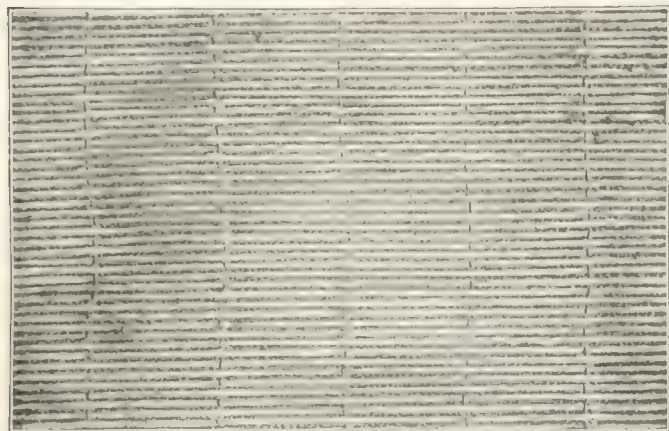
With the threads used in making the 1905 G & J tires, the fabric consists of a number of parallel threads of great strength. The uniform tension of the individual threads is assured by the fact that an absolute check is placed upon each thread, which is an essential point, and it is also important that these threads should be so laid that they cross each other at the proper angle, and by the methods pursued it has been possible to accomplish this result.

If the threads were under irregular tension, those on the greatest tension would have a tendency to exert an undue pressure on the threads which they cross at right angles, and possibly result in destroying the threads. Each thread is imbedded in a cell of rubber, forming a perfect insulation, and there is a layer of rubber between the different layers of threads, preventing the threads from coming in contact in crossing each other. By this method of construction, each thread, while acting under the same conditions and in harmony with the other threads, operates separately, preventing the heating already referred to, which is common in tires made of square woven cloth. In the thread tire there is one continuous rubber bead running the entire length of the tire between each thread, which insures a perfect union between the different layers of threads as well as an ideal union with the rubber cover itself, which allows the tire to be vulcanized or cured in what can properly be termed one solid, homogeneous mass, with merely the threads laid in the rubber. Those threads are very pliable, and allow the tire to change position in service with the slightest possible resistance, which means, as has been proved by extensive experience, that the tires are very pliable, fast, and free from internal heating.

It has also been proven that a tire of the thread fabric construction will last much longer than other tires, because with the threads there is not the self-destroying tendency that exists with the square woven cloth tire, and in consequence the thread tires will literally wear out in road service rather than have their usefulness ended by self destruction. Any tire that can stand the use and abuse of a racing car will stand anything and the new tire described here has been in use for some months, on most of the American makes of racing cars, and with the most satisfactory results.

#### SWINEHART'S NEW SOLID TIRE.

In the specification of United States Patent No. 772,636, James A. Swinehart (Akron, Ohio) points out that a practical rubber tire should have a high degree of cushioning character,

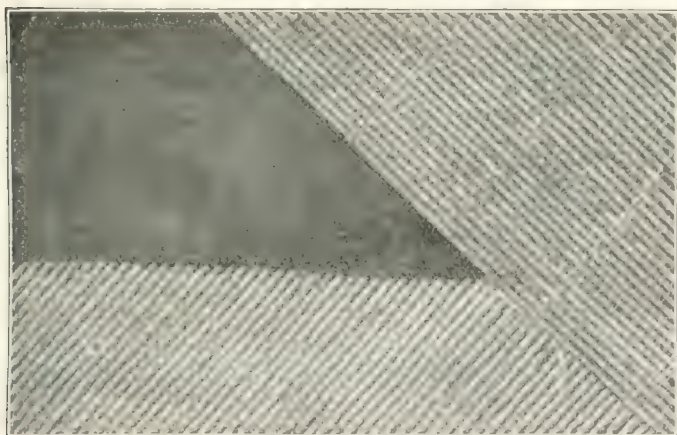


G. & J. THREAD FABRIC.

Showing its appearance after having been frictioned on one side. Note the beads of rubber that have been forced between the threads.]

entire length of the cloth, while in the thread tire the moisture would only affect the few individual threads in direct contact with the cut, for the reason that the threads in this tire do not touch each other—an important point in considering the life of a tire.

Each layer of cloth used in this process is rubbered, or frictioned, before being put into the tire. This consists of a rubber surface on the cloth, and the rubber is pressed into the meshes of the cloth, forming, as it were, a small individual



G. & J. THREAD FABRIC

[Showing the way the strong threads cross each other, with rubber between the layers.]

rubber rivet. When the different layers of fabric are built up in a tire, the greater part of the adhesion is reckoned on a basis of the strength of the rubber rivets referred to. These rivets are formed in the shape of the mesh of the cloth at the time it is vulcanized or cured, which is done by heat under pressure. With the cloth cut on a bias, and the tire changing in shape as it does in service, the shape of the mesh itself changes, having a tendency to destroy the adhesion of the rub-



long life and durability, and good traction qualities. He states that the resiliency of a solid rubber tire depends greatly upon its height and width, and the narrower the tire from side to side the better the results; but at the same time the tread should be of good traction width. His tire, therefore, has concave sides, to give the tire less body at its center, and thereby increase the cushioning effect, while the tread is enlarged and becomes even more so under load because of its convex form and head. Of the accompanying drawings, one is a cross section and perspective, and the other a diagrammatic view, in full and dotted lines, to illustrate the extreme differences in load carrying conditions. The tire is adapted to a vehicle rim of the "Clincher" type, made with inturred edges to fit into circumferential grooves in each side of the tire. The base and side widths are preferably covered with a non stretchable fabric to prevent creeping and spreading of the tire at its base.

### THE AUTOMOBILE TIRE OF THE FUTURE.

[FROM "THE MOTOR AGE," CHICAGO.]

ALMOST since the beginning of the pneumatic tire there has been a continual effort to create a satisfactory mechanically fastened, double tube, detachable tire. A score of such tires were introduced in the bicycle trade and twenty score more were patented by inventors, rural and otherwise. They all fell by the wayside. The clincher tire remained the standard construction.

Those people who judge everything by precedent might say that the result of the introduction of such tires in the bicycle trade indicates positively that the same end awaits the mechanically fastened automobile tire.

There are several reasons for believing, however, that the mechanically fastened tire as applied to automobiles will be a success to just as great a degree as it was a failure when applied to bicycles. In its new usage it has two new advantages. First of all, it is more needed than it was in connection with bicycles, and secondly, it is susceptible to styles of construction not feasible when made to fit onto bicycles.

The greater need of a mechanically fastened tire on an automobile is aptly explained by the more severe service to which it is put. This greater service necessitates a tire much stronger in proportion to its size than a bicycle tire, and hence a tire in every respect much more difficult to manipulate than a bicycle tire. Not only must the fastening of the tire to the rim be more secure and its manipulation hence made naturally more difficult, but the increased size of itself and the increased strength in proportion to size still further augment the work of placing the tire in position or of removing it.

Thus it is readily apparent that a mechanically fastened tire on an automobile furnishes a greater difference in the amount of work necessary in manipulation between it and the inflation-secured tire than was apparent between the two styles of tires on bicycles. The advantage of convenience, in other words, is more notable in connection with automobiles than it was in connection with bicycles.

The tendency of a tire to creep on the rim, while present in bicycle tires, is not so important a factor in tire usage on bicycles as it is in automobile tire usage. Thus the advantages which are offered by the mechanically fastened tire in the way of positive fastenings to prevent creeping and the demolition of valve stems is also a more important item in the present case than in the former one.

There can be little doubt, then, of the two facts that in the first place the mechanically fastened tire has inherent advantages and that in the second place these advantages are more

important in automobile than in bicycle usage. There remains, in determining the status of this tire, to determine whether in the application of it the natural advantages are outweighed by the practical disadvantages.

As a bicycle tire there is no doubt that the disadvantages more than offset the advantages. As an automobile tire it gains a new lease on life by increased advantages, and at the same time becomes more practical by decreased disadvantages.

The construction of automobile wheels is such that the tires upon them are not restricted in size and weight as in bicycle tires. The fastening means may occupy a greater space and be of greater weight in proportion to the size of the tire than when the tire is made for a bicycle. There is plenty of space for and plenty of material may be used in the making of the fastening means which, when adapted to a bicycle tire, were of necessity so delicate that they would not stand the racket. In fact, there has been shown the practicability in actual use of mechanically fastened automobile tires of a construction identical to that of bicycle tires which were failures.

From whatever point of view the matter is considered, it is evident that the present tendency toward the establishment of mechanically fastened tires in the automobile trade is not without considerable indication of eventual success.

### LITERATURE OF INDIA-RUBBER.

THE CEYLON HANDBOOK AND DIRECTORY, AND COMPENDIUM of Useful Information, for 1904-05. To which is prefixed a Statistical Summary for the Colony, and Specially for the Planting Enterprise, up to June, 1904. Compiled and Edited by John Ferguson, M. G. S. I. C., Editor of the *Ceylon Observer*, *Tropical Agriculturist*, etc. Colombo: A. M. & J. Ferguson, 1904. [Cloth. 8vo. Pp. lxxv. 1272 maps and insets. Price, 15 rupees.]

THIS is the twenty-seventh annual edition of a most valuable reference book, the scope of which was outlined in some detail, on the appearance of the preceding issue, in THE INDIA RUBBER WORLD of January 1, 1904 (page 121). It will suffice here to say that the latest volume, besides being revised to date, embraces additional features of value, while some of the information contained hitherto is given more fully or with increased accuracy. The Handbook merits notice in this column because it furnishes the most accurate record to date of rubber planting in Ceylon—an interest which is destined to be of great importance to the world. Some information drawn from the new volume appears in another department of this issue of THE INDIA RUBBER WORLD.

#### IN CURRENT PERIODICALS.

THE Acre Territory and the Caoutchouc Region of Southwestern Amazonia. By Colonel George Earl Church. [Refers to the resources of the Acre district, and present and prospective means of access to it.] = *The Geographical Journal*, London. XXIII-5 (May, 1904). Pp. 596-613; folding map.

L'Hevea Asiatique. By E. De Wildeman. [Review of the report by Monsieur Collet.] = *Industrie et Commerce du Caoutchouc*, Brussels. I-11 (December, 1903). Pp. 234-235.

The Commercial Utilization of the Seeds of the Pará Rubber Tree (*Hevea Brasiliensis*). = *Bulletin of the Imperial Institute*, London. II 1 (March 31, 1904). Pp. 22-23.

Four New Species of the Central American Rubber Tree. By O[rator] F. Cook. = *Science*, New York. N. S. XVII-457 (October 2, 1903). Pp. 436-439.

Le Castillo et du Culture en Amérique Centrale. [Review of the report by O. F. Cook on "The Culture of the Central American Rubber Tree."] = *Journal d'Agriculture Tropicale*, Paris. IV-32 (February 29, 1904). Pp. 49-52.

Der Kautschuk liefernde Feigenbaum von Neucaledonien (The caoutchouc yielding fig tree of New Caledonia). By Dr. Otto Warburg. [With illustration of *Ficus Schlechtri*.] = *Der Tropenpflanzer*, Berlin. VII-12 (December, 1903). Pp. 581-584.

## THE INDIA-RUBBER TRADE IN GREAT BRITAIN.

*By Our Regular Correspondent.*

THERE is very little of a satisfactory nature to be said with regard to this branch. The depression of the last two years still continues and no signs of its immediate removal are discernible. One result of this is that those firms who formerly relied altogether upon this branch are extending into others, such as mechanical rubber, or branches of the tailoring trade having no connection with waterproofing. A combination of adverse factors has militated against the home trade, more especially in the north of England; in addition to the extremely dry summer and autumn, there has been the decreased buying power of the operatives, owing to the depression in the cotton trade and various other trades which depend largely upon the staple trade for their well-being. What business has been done has been chiefly with the British colonies, though even here, notably in Canada, the demand is reported as having fallen off to a considerable extent. Pattern books are now being got out for next season, but these will not show the variety and range of materials that characterized them a few years ago. Now that the cotton trade is in for something of the nature of a boom there will undoubtedly be a larger sale of the low priced goods, both macintoshes and the showy looking overcoats made entirely of shoddy and to which the description of "shower proof" is erroneously applied. Firms who turn out really good stuff answering to its title of shower proof say that they get no encouragement, because the particular style and pattern is speedily copied by some one else in inferior materials and at a price which proves an irresistible attraction to the bulk of purchasers. The workingman seems to have satisfied himself that two or three suits of shoddy form a superior purchase to one suit of good wool and as long as this doctrine obtains there is nothing for the merchant to do but to minister to it. With regard to factory equipment it is interesting to note that in the enlarged town premises to which Messrs. H. L. Gotliffe & Co. moved some little time ago, in Blossom street, Ancoats, Manchester, the sewing machines are all worked by electricity. The whole of the machines and the five motors are of American origin, being supplied by the Singer Manufacturing Co., the installation I understand giving complete satisfaction. I believe I am right in saying that electrical power is used by the Leyland and Birmingham Rubber Co. for a similar purpose, though I am unaware of its application elsewhere in the waterproofing trade.

As the Scandinavian rubber manufacture has recently been specially referred to in this Journal, it may be of interest to add a word or two with regard to the waterproof business. So far none of the Scandinavian manufacturers have taken up this branch, and the British houses which have done business in the past have not suffered from home competition. What business has been done is not on a very extensive scale, and in common with what has occurred elsewhere the macintosh shows a decline rather than an increase in popularity. It has never been popular to the extent that was witnessed a few years ago in Holland, when certain English makers reaped a rich harvest. It is not difficult to account for this; in the first place, compared with Holland, the bulk of the Scandinavian people are poor and limit their expenditure pretty well to necessities, and in the second place, though there is a good deal of rain in summer, the climate during the major part of the

year is very severe and the macintosh garment does not prove sufficiently attractive on the score of warmth. As far as the trade is concerned it is recognized that the article is more suited to mean climes than to those where summer heats or winter colds are excessive and permanent.

I UNDERSTAND that a movement is on foot to consolidate the interests of the principal tire manufacturers, as far as the regulation of prices is concerned. There is to be no attempt at an effective combination of works, the proposed arrangement only going as far as that which has been in existence so long among the makers of elastic thread and which proved thoroughly workable. Having regard to the larger number of firms engaged in tire making, the difficulties in the present case may reasonably be expected to be greater and, it may turn out, insuperable, but there is little to be gained by speculating on the point. It is quite clear that if close competition among the various manufacturers is to take place the profits yielded by the business are not likely to prove remunerative, and a combination to the extent foreshadowed above will at any rate do something to keep up quality. There is not much information obtainable as to the proposed English Michelin company, though it is understood that the site for the factory is in the London district. From the tone of remarks in some of our papers the incursion of French capital and probably of French workmen in this connection is not looked upon with much favor. Of course the retort may be made that factories for various kinds of businesses have been started on the Continent under British auspices, but the cases are not exactly parallel. It is the imposition of prohibitive tariffs that has induced such action on the part of the British, while with our free trade the same cannot be urged on behalf of foreigners establishing themselves in this country.

Quite a modern development in the motor tire business is in relation to omnibuses for town and country use. Within the last few months motor omnibus services have been started in London and Birmingham, and also by some of the railway companies as feeders to their lines in country districts. Notably is this the case with the Great Western railway, in Cornwall. The tires generally—indeed, I think I am correct in saying exclusively—used are the twin motor tires patented and manufactured by the Shrewsbury & Challiner Tyre Co., of Ardwick, Manchester. These are designed to support heavy weights and prevent sideslip, an important point in towns such as Birmingham, where several steep hills have to be negotiated. I understand that though one or two cases of slip occurred in this town on the first introduction of the omnibuses, this was found to be due to the position of the treading (?) wheels rather than to any defect in the tires. Since the position of the wheels has been slightly altered no further *contretemps* of the kind has occurred. No doubt this form of locomotion will become increasingly popular, and the firm who have already established such a name in connection with the necessary tires would seem to be in for an exceedingly busy time.

As the subject of Gutta-percha has achieved some prominence in recent issues of THE INDIA RUBBER WORLD, it may not be superfluous to say a word here regarding its preparation from the leaves of the tree. As is well known this method of procuring it formed the subject of several patents some

THE GUTTA-PERCHA  
MANUFACTURE



years ago, one outcome of which was the formation of the Gutta-Percha Corporation, Limited, with a nominal capital of £350,000. From a source intimately concerned with this company, which, as is also known, came to an untimely end, I learn that apart from its flotation which had several curious features connected with it the difficulties which proved so disastrous were lack of sufficient working capital and also the very important fact that the material obtained was by no means equal to the ordinary Gutta-percha as obtained from the mature tree. Naturally the ordinary investor would think that with the names of Lord Kelvin and Professor Ramsay on the prospectus as experts such an important point as this would have been absolutely settled. The result, however, goes to show, if more evidence of the fact is required, that though a scientist may be preëminent in some directions, his attainments are not necessarily of a universal character.

At the tenth International Shoe and Leather Fair, held in Agricultural Hall, Islington, London, from October 31 to November 4, a very prominent feature, as last year, was the exhibits of rubber heel pads, the great popularity of which in Great Britain was treated at some length in THE INDIA RUBBER WORLD of May 1 last (page 278). More than a dozen extensive displays were made, some of the exhibitors manufacturing their own goods. The only firm engaged in the general rubber manufacture, exhibiting heels on their own account, was the Hyde Rubber Works, Limited. One display was devoted to a heel of American manufacture—being made by the Pennsylvania Rubber Co.—though exhibited under the name of a London firm. A notable exhibit of rubber footwear was made by the London depot of United States Rubber Co., and a good exhibit in the same line was made by the North British Rubber Co., Limited. A feature of interest in connection with the fair was the appearance of the *Footwear Daily*, due to the enterprise of the important weekly trade journal, *Footwear*. This was probably the first daily ever published in connection with this trade. On account of its success, the suggestion was heard that such paper in connection with cycle shows might be worth while.

NOT being a golfer, I have to depend on others for information on this important topic. It seems that of all the balls on the market, the Haskell is in the greatest favor; the Kempshall is reported as being liable to crack on the surface, though the dealers are always willing to replace one that behaves in this undesirable manner in the first round. The Haskell ball is still retailed at 2 shillings, and some difficulty is experienced in filling the demand even at this price, as the balls want seasoning and must be kept in stock for some time. The solid Gutta-percha ball is still largely used in Scotland, a statement that perhaps requires a little elaboration. In Scotland, contrary to what obtains in England, the pastime is largely indulged in by workingmen who pay a penny a round on public links. It is this class who find the solid ball, which can now be obtained for 4 pence, attractive. At places like St. Andrews and North Berwick, where Mr. Balfour puts in much of his leisure time, the question of cash is of no great importance, and it is here that one hears the praises of the 2 shilling ball sung.

IN the course of a recent conversation with a large machinery exporting firm I was informed that the South African mining machinery business, had almost died out owing to American competition. This is a matter to which in some of its aspects I have already referred in this correspondence, but a further word or two may not be out of place. Compared with seven or eight years ago the amount of rubber used in connection with ore dressing ma-

chinery has diminished, in one respect at least, owing to the general abandonment of the Frue vanner in favor of tables of the Lührig and Wilfley type, in which linoleum is used instead of rubber for the buddling surface. In other directions, such as conveyor belts and hydraulic hose, the use of rubber has increased. I note that Messrs. F. Reddaway & Co., Limited (Manchester), have a special advertisement relative to the goods they supply for mining purposes; no doubt this branch will receive more and more attention, especially at the hands of firms such as the Leyland and Birmingham company, who have established offices of their own in the Transvaal. Perhaps it is too much to expect that the average rubber manufacturer shall have a close acquaintance with the developments in ore-dressing machinery and general mine equipment, but the fact that certain American firms have established a reputation in this by no means insignificant branch is surely worth the attention of other firms who are desirous of extending their connection, by incursions into new fields. With regard to mining ventures, it is said that there are ten failures to one success. I do not vouch for the accuracy of this dictum, but no doubt there is a good deal of truth in it.

AN issue of £100,000 4¼ per cent. debenture stock at par has recently been made by the North British Rubber Co., Limited (Edinburgh). The London *Economist*, in referring to this, states that the assets (no good will included) are valued at £543,439. The average profits of the last three years were £67,273 and for the last seven years £58,593, from which figures the *Economist* considers that the issue is very well secured.

#### PRICES OF RUBBER FOOTWEAR.

AT the last business meeting of the Northwestern Shoe and Leather Association, at St. Paul, on the evening of October 10—which was preceded by an enjoyable dinner—a discussion of the "Prices of Rubber Footwear" was participated in by all present. Mr. Albert Fischer, president of the St. Paul Rubber Co. [according to the *Northwestern Shoe and Leather Journal*], expressed the opinion that there never was a better opportunity than now for retailers to secure good prices for rubber footwear. While the prices of rubbers are quite high, the consuming public have become well educated to the fact that crude rubber prices are higher than in the past, and they expect to pay more for rubber footwear; consequently, retailers can get good prices and they should do so. All the members present agreed on this subject, and after considerable discussion and comparison of prices charged by retailers for the same styles and grades of rubbers, it was found that there were only very slight differences in the prices charged.

Some of the city retailers contended that stores in different localities in the same city could not charge the same for the same classes of rubber footwear, as the class of customers in different localities vary, and the expense of keeping up their respective stores also vary. Consequently, some stores could sell the same style and grade of rubbers a few cents cheaper than others whose expenses were higher, and still make the same percentage of profit. It was finally agreed, however, that the stores could and should charge practically the same price for the same style and grade of rubbers, and that a fair profit should be made on rubbers as well as on leather footwear, notwithstanding the fact, that heretofore there has been a sort of unwritten law among shoe retailers that rubber footwear should be sold at a low margin of profit, something like a grocer handling sugar, merely an accommodation to his customers and not because of the profit made on sugar.

THE SHOE  
AND LEATHER  
FAIR.

NEW CAPITAL  
ISSUE.

GOLF  
BALLS.

RUBBER IN  
METAL MINING.

## SOME RUBBER INTERESTS IN EUROPE.

## REPORT OF THE HARBURG-VIENNA COMPANY.

THE report of the Actiengesellschaft Vereinigte Gummiwaaren-Fabriken Harburg-Wien, presented at the recent general meeting at Harburg a/d Elbe, Germany, related to the thirty-second business year of the company, ending June 30, 1904. The report, after presenting statistics of the world's production and consumption of crude rubber, proceeds to say:

The figures given above show that the consumption is continually increasing, and that lower prices can only be counted on should the supply very materially increase. It is highly satisfactory to learn from our colonies, and especially from Kamerun, that the planting of Caoutchouc trees is being encouraged, and that measures are being taken to decrease the destruction of the trees for the sake of increased profits. In the countries of origin from which we have hitherto received our supplies everything possible is being done to increase the production by increasing the facilities for gathering and by improving the roads, so as to facilitate transportation from the forests to the central depots. We hope these efforts may tend to increase the supply during the next few years.

The considerable increase in the cost of crude rubber and of other materials used in our manufactures, amounting to about 2,000,000 marks [= \$176,000], has naturally resulted in decreasing the percentage of our profits in comparison with that of the last two years, while we have, moreover, been compelled to adapt our selling prices to those of our competitors, in order not to lose our customers. We are, however, strongly convinced that the results shown during the last two years will be even more strongly accentuated during the current year, which, taken in conjunction with the downfall of Austrian and German rubber works, will finally cause those interested in rubber industries to open their eyes and give attention to the disaster that must surely follow if selling at a loss is continued much longer. We are likewise convinced that the time is coming when the attempts to bring all the manufacturers under a mutual understanding, but which have hitherto been unsuccessful, will at last take definite shape.

All our works are well supplied with orders, and we hope to be gradually able to fix our selling prices in accordance with prevailing conditions.

The gross profits of the goods account amount to *M* 2,729,948.29 [= \$649,727.69], against *M* 3,374,100.67 of the preceding year, and *M* 4,015,875.07 in the year 1901-02. The net profit for the last business year amounted to *M* 830,301.45 [= \$197,611.75], against *M* 1,460,070.45 last year, and was disposed of as follows:

Net Profit for the year.....	<i>M</i> 830,301.45
Dividend 5 per cent. on the entire Capital.....	300,000 00
	<i>M</i> 530,301.45
Less 10 per cent. Commission to the Directors....	53,030.15
	<i>M</i> 477,271.30
Add Balance from profits of 1902-03 .....	204,207.06
	<i>M</i> 681,478.36
Dividend 7½ per cent. on the entire Capital .....	450,000.00
	<i>M</i> 231,478.36
Less Officers' Pension Funds .....	50,000.00
Balance to 1904-05.....	<i>M</i> 181,207.06

The capital of the company remains at *M* 6,000,000 [= \$1,428,000], and the reserves at the former large figures.

In relation to a new material in which the company have taken a lively interest the Harburg-Wien report says:

**Galalith.**—We have, since the commencement of the current year, been engaged in regular manufacture in our newly erected plant. Sales are already showing a substantial increase, which makes us confidently

hope for a future favorable development of this branch. It is to be regretted that we cannot obtain the raw material in our country as cheaply as from foreign countries, and we are therefore forced to import our supply. It is also to be regretted that the new tariff requires a duty of 10 marks to be paid per 100 kilos of the raw material [= \$23.80 per ton], and we fear we shall severely suffer thereby as soon as the patents shall have run out and when the Galalith manufactured in foreign countries shall commence to be imported into Germany, since the new tariff calls for a duty of only 3 marks per 100 kilos [= \$7.14 per ton] on Galalith plates. If we are not successful in having this abnormal rate set aside, we shall be compelled to remove our works to some foreign country.

## RUBBER GOODS AT THE NIJNI-NOVGOROD FAIR.

RUBBER goods are offered in increasing quantities at the annual fairs (the largest in the world) held at Nijni-Novgorod, the capital of the government of the same name, situated at the junction of the Oka and Volga rivers, in central Russia. This fair is attended sometimes by from 200,000 to 300,000 merchants, from Russia and western and central Asia, and has become an important distributing point for manufactured goods of many kinds. A note in the *Gummi-Zeitung* mentions that at the last fair, held in August and September, the rubber goods shown were of the value of more than 2,500,000 rubels [= \$1,287,500]. The goods included mechanical and surgical articles, boots and shoes, and waterproof clothing, and met a ready sale. The quotations for footwear, owing to the advanced cost of raw rubber, had been advanced at the fair at Moscow, held previously, by 12½ per cent., and these prices were in effect at Nijni-Novgorod. Shoes are sold at list prices with a discount of from 31 to 40 per cent., and the other goods at discounts at from 20 to 25 per cent. The principal purchases of rubber goods of all kinds were for western Siberia, the regions of the Volga and Kama, and Caucasia. Rubber goods are mentioned as having been in good demand at Moscow before the fair, occasioned by large purchases for army purposes.

## THE GRAMMONT FACTORIES, IN FRANCE.

THE exhibit in the Electricity building, at the St. Louis Exposition, of the long established French house, Établissements Industriels E. C. Grammont—A. Grammont, Successeur, has been mentioned briefly in THE INDIA RUBBER WORLD heretofore. In 1852 the late E. C. Grammont began at Pont-de-Chéruy the manufacture of steel wires, for small industrial uses, to which he later added copper working, so that he was prepared, at the first inception of the modern development of the electrical industries, to take on the production of wires and cables for use in the new field. In 1891 the house manufactured and laid down for the government a cable of 510 nautical miles, between Marseilles and Algiers, this being the first French made submarine cable. Since that time a number of other contracts of importance have been executed, or are in progress, including the Mozambique-Majunga cable (in 1895), of 372 nautical miles. The construction of electrical machines was taken on in time, and contracting for electric installations, including street railways and lighting plants in a number of French cities. In addition to various articles of hard and soft rubber incidental to their electrical work, the house of Grammont now manufacture pneumatic tires and general rubber goods, of which specimens were shown at St. Louis. The original works at Pont-de-Chéruy are still maintained, together with works at Plaine-Chavanoz, for electric plant, and



at Saint-Tropez, for armoring submarine cables, the whole business being now owned and managed by Monsieur Alexandre Grammont. The highest awards have been made to the house at expositions at Lyons, Brussels, and Paris.

#### AUTOMOBILE SHOWS IN GERMANY AND FRANCE

THE rubber exhibits at the international automobile exhibition held at Leipzig, October 15-23, were representative of some of the leading manufacturers in Europe and were extensive and attractive in appearance. While devoted principally to tires, some of them included also the various other articles of rubber equipment for automobiles, motor cycles, and even bicycles—for cycling is by no means a lost art in Germany. Among the exhibitors were the following:

*Germany*—Continental Caoutchouc- und Guttapercha-Compagnie, Hannover; B. Polack, Walterhausen; Gummiwerke Oberspree, Oberschöneweide; Lins Pneumatic Compagnie, Berlin; Carl Stöckicht, Frankfurt a/M.

*France*.—Michelin et Cie., Clermont-Ferrand; Etablissement Hutchinson—from the German branch at Mannheim.

*Great Britain*.—North British Rubber Co., Limited, Edinburgh.

An international automobile exposition will be held in Berlin February 4-19, under the presidency of the Duke of Ratibor and the joint control and management of the German Automobile Club of Berlin and the Association of German Motor Vehicle Manufacturers at Cannstatt. These two organizations, comprise and represent, respectively, the varied interests of Germany in the use and manufacture of motor vehicles for purposes of sport, travel, and transportation. No doubt the leading European tire manufacturers will be well represented at the Berlin show.

The seventh annual Exposition Internationale de l'Automobile in Paris, under the auspices of l'Automobile Club de France, will be opened in the Grand Palais on December 9 and be continued for 15 days. Exhibits will be comprised in 15 classes, of which Class V will be devoted to tires for automobiles and other vehicles, including bicycles and motorcycles.

#### GRAND PRIZE FOR THE LAND AND SEA CABLE CO.

THE Land- und Seekabelwerke Aktiengesellschaft (Cöln-Nippes, Germany) write to THE INDIA RUBBER WORLD that a gold medal was awarded, at the St. Louis Exposition, for their display of insulated wires and telegraph and telephone cables. They had previously received high awards at Berlin (1901), Düsseldorf (1902), and Dresden (1903).

#### NEW ENGLISH COMPANIES.

REILLOC Tyre Co., Limited, registered in London October 6, 1904; capital £10,000, in £1 shares; to adopt an agreement between A. T. Collier, Bertram & Egerton, Limited, and E. Dyke, to hold and exploit certain patents and properties referred to in said agreement, and to carry on a business not particularly described except in the title. Registered office: 123, Victoria street, S. W., London.

=Empire Rubber Co., Limited, registered in London October 19, 1904; £10,000; to acquire the business of manufacturing rubber heels carried on by J. B. Whitley and T. Brayshaw at 45, Grand arcade, Leeds (which is the registered office of the new company). No initial public issue.

#### GREAT BRITAIN.

THE India-Rubber, Gutta-Percha, and Telegraph Works Co., Limited, now that the patents controlled by the Dunlop company have expired, are putting on the market beaded-edge and wired-on tires, under the name "Silvertown."

=The London depot of the United States Rubber Co. has opened a department devoted to rubber coats, with a view es-

pecially to the requirements of sportsmen and outdoor workers. The company are reported to be doing a large business in rubber footwear, of which they carry usually about 500,000 pairs.

=The "Harbro" Rubber Co., large manufacturers, at Market Harborough, of rubber heel pads, are mentioned as having secured a patent for pneumatic tires, which they will proceed to manufacture. They have also been booking orders for railway buffers, which indicates that they intend a general expansion of business.

=A block of Pará, weighing half a cwt., said to be "the first piece ever imported into Ireland," has been on show in a Belfast boot shop in connection with rubber heels. Does this foretell the establishment of a rubber factory in the Green Isle?—*The India-Rubber Journal*.

=The death is announced of Mr. Robert Kerr, a director and large shareholder in F. Reddaway & Co., Limited, rubber manufacturers of Pendleton, Manchester. He was formerly senior partner of Kerr & Jubb, dealers in mill supplies and rubber goods, at Halifax, England, which business in time was merged into that of Messrs. Reddaway.

=The directors of New Pegamoid, Limited, propose a dividend at the rate of 8 per cent. for the year ended September 30, 1904—the same rate as paid last year.

#### GERMANY.

THE Hannoversche Aktien-Gummiwaren-Fabrik (Hannover and Solin-München) have transferred their manufacture of *patent gummi* (cut sheet) goods, and nipples and other seamless goods, to the Bayerische Gummiwaren-Fabrik München G. m. b. H. This firm, as well as the latter, transacts business with dealers only.

=The death is reported, at Altona-Ottensen, of Herr Richard Arndt, for many years connected with the sales department of Loewitz & Rohlf, manufacturers of Balata belting and Rubber goods. The deceased, who was taken away in the prime of manhood, was widely loved and respected, in token of which his funeral was largely attended and many beautiful floral tributes sent.

=The firm of Julius Roller, rubber goods manufacturer at Metz, received at the international exposition for hotel and restaurant supplies a gold medal and a prize of honor, which latter was offered by the officers of the Royal Bavarian Fourth Infantry regiment. A diploma of honor was awarded to the manager of the firm, Herr Tillian.

=Herr C. L. Strack, who has been connected with the Mannheimer Gummi, Guttapercha, und Asbest-Fabrik since November, 1878, and their Berlin representative for 12 years, celebrated lately his 23 year jubilee.

#### RUSSIA.

THE share capital of the Russian-American India-Rubber Co. (St. Petersburg) has been increased from 6,000,000 rubels to 6,500,000 rubels [= \$3,347,500].

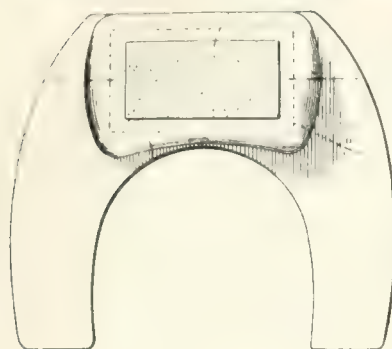
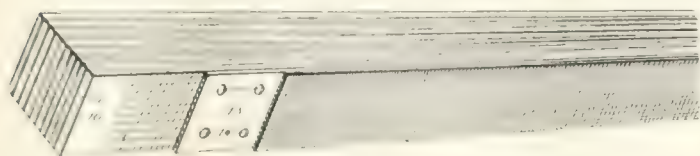
#### MANUFACTURE OF RUBBER FOOTWEAR IN BELGIUM.

AS has been mentioned already in these pages, the Société anonyme Belge pour le Commerce et l'Industrie du Caoutchouc is about to undertake the manufacture of India-rubber footwear in its factories at Alost. It is at present engaged in installing in its new buildings the special material quite recently purchased in Germany, and they hope to be able to have their goods on the market by the end of December. As the consumption of India rubber footwear in Belgium would not be sufficient to keep the factories going, the company proposes more especially to do business for exportation, and orders have already been received, principally from Asia, which promises to be a very large field.

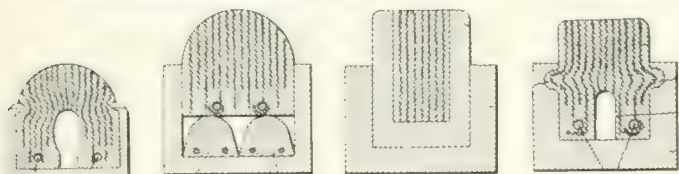
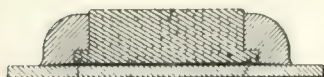
## NEW GOODS AND SPECIALTIES IN RUBBER.

## "WOVEN WIRE RUBBER."

THE practice of building up plies of fabric and rubber for wearing surfaces is by no means new, nor is the cutting of frictional cloth on the bias novel, but the application of those principles to woven wire in connection with rubber is new, and is the subject of a number of patents owned



by the Woven Wire Rubber Co. (No. 10 Grand circle, New York). The first application of their principle, that is practically, was in the manufacture of horseshoes of various forms, a pad or channel filler being made of a block of woven wire rubber. This form of rubber is made up of alternate layers of rubber and wire fabric pressed and vulcanized together, the wire fabric being laid upon the bias. The block is then cut in-



to strips or blocks to fit the desired recess, and forced into place, lying so that the ends of the wire threads are the wearing surface. In conjunction with light aluminum shoes a very neat, light, and durable horseshoe is produced, and one in which, so it is said, there is not the slightest danger of slipping. The same stock has been applied to the treads of automobile tires with decided success, and with the further advantage that the strip is puncture proof to a degree. The first of the cuts herewith relates to composite blocks of wire and rubber, applicable to different uses—for instance, for the treads of horseshoes. The second illustration represents the construction of a horseshoe. The third illustration relates to sections of vehicle tires, of different types of construction, involving the use of "woven wire rubber."

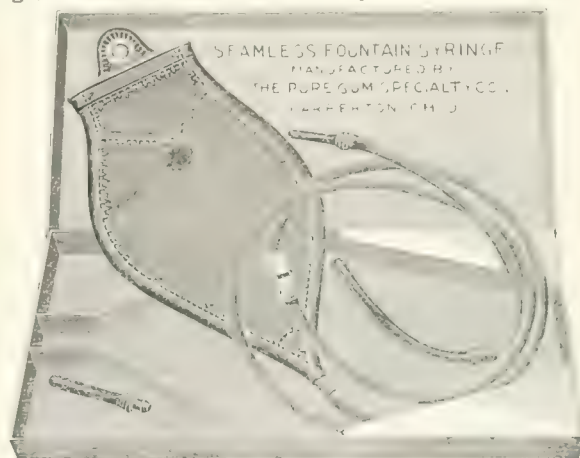
## A NEW IDEA IN RUBBER BELTING.

THE manufacturers of stitched cotton belting of late seem to have made considerable progress in the introduction of this class of belting into factories where previously rubber belting was used exclusively. The cost of the cotton as against the rubber belt was apparently the main consideration that induced some manufacturers to make such a radical change in the class

of belt used. To meet the competition of the stitched cotton belting, the Canadian Rubber Co. of Montreal have introduced a rubber belt, with certain peculiarities, which can be produced at a materially lower cost than the old method of manufacturing rubber belting. The cheapening of the cost of production, while assuring a rubber belt of high grade, seems to have been successfully accomplished by the above named company, who have applied for patents in both Canada and the United States. This new type of rubber belting is designed to meet the requirements of the threshing and lumbering interests of the Dominion, and inquiries are being received from all parts of Canada for detailed information regarding the special features of the new belt.

## A MOLDED FOUNTAIN SYRINGE.

THE illustration herewith relates to a molded fountain syringe, of which the manufacturers say: "It is to the best of our



knowledge the first of its kind ever introduced to the trade. There are some dipped seamless bags on the market, but any one understanding the wearing qualities of the molded article will readily see the advantages of the molded fountain syringe bag." Patents have been applied for on this new article. [The Pure Gum Specialty Co., Barberton, Ohio.]

## AUTOMOBILE FABRIC SUPPLIES.

A VERY considerable business has been established by a certain company in manufacturing a special line of articles for use



by automobilists, in connection with which more or less rubber is used, and which in any event merit mention here by reason of their relation to the rubber tire trade. The first which will be noted is the Gilbert Tire Case, designed to protect from water or dust the extra tire carried as a measure of precaution on an automobile. Not only is a tire carried without covering, or one wrapped in burlap, unsightly, but the tire is liable to deterioration from exposure. The tire case here illustrated is made of strong black enameled duck, and is held in position by lacing through eyelets.



Waterproof bags for tire inner tubes are also supplied. The same firm are marketing rainproof Rubber Cloth Covers, which are a practical article for the protection for automobiles in certain situations. These have been made in varying sizes up to 150 inches wide by 260 inches long. [The Gilbert Manufacturing Co., New Haven, Connecticut.]

#### THE GOODRICH WIRE WRAP.

THIS type of wire, for armoring rubber hose, was originated for the purpose of overcoming certain unsatisfactory features of other wires in use, and is the subject of United States patent No. 726,730. It is designed to add to the life of hose which is subjected to hard usage and liable to be dragged over rough places. It is made with a fin projection on the underside of the wire, which, while giving a firm grip, does not cut or otherwise injure the hose. This prevents the wire from slipping, and holds it in place. The wire can be supplied flat or round, as desired. [The B. F. Goodrich Co., Akron, Ohio.]



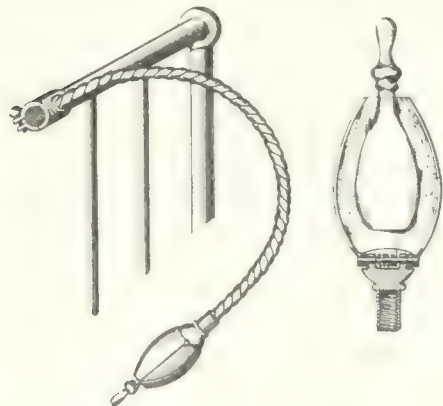
#### "DIAMOND" SOFT COVER BATTERY JAR.

THE patented battery jar illustrated herewith is designed especially for automobiles, electric railways, and electric lighting plants. It is constructed with an  $\frac{1}{8}$  inch wall— $\frac{3}{8}$  of an inch hard rubber, and over this  $\frac{1}{2}$  of an inch soft rubber—with a view to easing any shock the jar may receive in handling or otherwise, and keeping the jar whole, even if the hard rubber should become cracked. [The Diamond Rubber Co., Akron, Ohio.]



#### NOVEL NURSING APPLIANCE.

ALICE FRANK of New York has obtained a United States patent (No. 773,252) on the device illustrated herewith, which

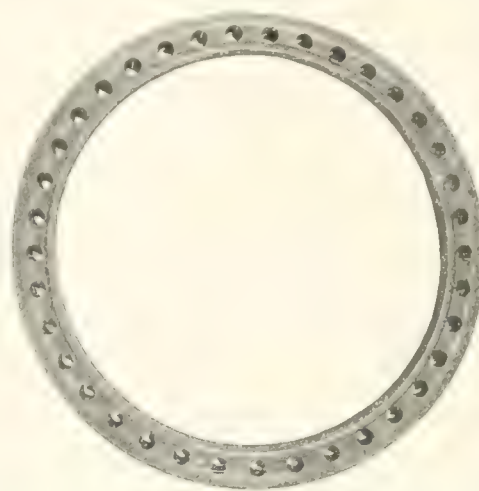


embraces a nursing bottle holder, with means of attaching the same to a bedstead, chair arm, or the like; also means for retaining heat in the food holder for an indefinite period. The bottle holder consists of two hinged and spring actuated shells, provided

with a non conducting lining, and a holder for supporting the shells in position. The patent further relates to a flexible arm attached to the holder, and a clamping device attached to the opposite end of the arm. Instead of an infant's feeding bottle, a suitable liquid or solid food receptacle may be substituted, and the form of the shells modified in order to support the same.

#### ST. JOHN NON PUNCTURABLE AUTOMOBILE TIRE.

IN the tire illustrated herewith a cushioning, or resilient, effect, is secured by piercing a series of round holes sidewise



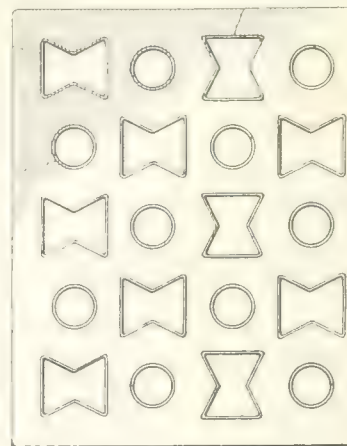
through the rubber, between the planes of the tread and the rim. It may be described otherwise as having a tread surface and a rim surface, each continuous, and having between them a number of rubber cushions, at equal distances apart,

the openings between the cushions affording the resilient effect. The tire is referred to as being designed to eliminate all trouble from punctures, rim cutting, leaky valves, and the like, and the necessity of inflating. The tire is made in one piece, and fastened to the wheel by a series of bolts. It is made to fit any ordinary rim. The invention is covered by a United States patent granted recently to H. N. St. John. [St. John Rubber Co., No. 116 Broad street, New York.]

#### A NOVELTY IN RUBBER MATS.

THE illustration relates to a mat which comprises an elastic body having pockets therein, and metallic liners of said pockets

having scraping edges designed for effectively removing dirt from the shoes, besides which destructive straining of the elastic body due to compression is avoided because the liners relieve the elastic body of severe strain. By extending the openings entirely through the body the mat is reversible, and either the bottom or top surfaces can be used, and upon removal of the mat the dirt can be removed. But in case it should be desirable to retain the dirt in the mat so that the dirt and mat can be removed together, a bottom of fabric may be secured to the under surface of the elastic body. At the left of the cut are shown illustrations of two forms of the metallic liners, though the invention is not confined specifically to these forms. United States patent No. 771,809, issued October 11, 1904, to Arthur S. Burnell. [Queen Manufacturing Co., Marshalltown, Iowa.]



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RUSSIA.—Rubber belting or bands are included in the list of articles, to be used in gold mining in Siberia and the Ural, which may be admitted duty free over all Russian frontiers, until December 31, 1908.

## RECENT RUBBER PATENTS.

## UNITED STATES OF AMERICA.

ISSUED OCTOBER 11, 1904.

- N**O. 771,890. Mat. [The combination of an elastic body having a plurality of pockets therein, and metallic liners held in said pockets and forming the pocket walls.] A. S. Burnell, assignor to Queen Manufacturing Co., both of Marshalltown, Iowa.
- 771,947. Vehicle tire. [Solid rubber, with "Clincher" rim.] J. A. Swinehart, Akron, Ohio.
- 772,026. Rubber soled [leather] shoe and welt therefor. G. F. Butterfield, Framingham, assignor to G. I. Butterfield, Boston, Mass.
- 772,027. Rubber soled leather boot or shoe. *Same*.
- 772,050. Horseshoe [consisting of an elastic tread section and a metal frame]. F. D. Palmer, Poughkeepsie, and A. H. Isham, New York city; said Isham assignor to said Palmer.
- 772,068. Machine for setting rubber tires. J. M. Sweet, assignor to The Sweet Tire and Rubber Co., both of Batavia, N. Y.
- 772,069. Metal securing-rim for elastic wheel tires. *Same*.
- 772,080. Cushioned rubber tire for vehicles. R. Bell, Glenae, Scotland.
- 772,111. Holder for ink or pencil erasers. J. L. Nicholson and E. A. Hemphill, Jersey City, N. J.
- 772,161. Spindle for forming rubber nipples. C. E. Longden, Hamden, Conn., assignor to The Falcon Rubber Co.
- 772,204. Fountain pen. F. W. Bender, Hoboken, N. J.
- 772,209. Wheel rim [for elastic tires of vehicles]. R. S. Bryant, Columbus, Ohio.

*Trade Marks.*

- 43,465. Rubber gloves. The Buffalo Rubber Manufacturing Co., Buffalo, N. Y. *Essential feature*.—The capital letter B inclosed in a scroll-shaped figure. Used since Nov., 1903.
- 43,520. Rubber belting. Jewell Belting Co., Hartford, Conn. *Essential feature*.—The word GEM. Used since January 1, 1904.

ISSUED OCTOBER 18, 1904.

- 772,467. Self-filling fountain pen. R. G. Lockwood, Boston.
- 772,554. Fountain pen. J. H. Bullard, Springfield, Mass.
- 772,585. Belt coupling. T. F. Smithson, Whiteford, Md.
- 772,609. Tire [comprising an outer yielding casing, a retaining band for holding the tire to a wheel rim, and a chain of longitudinally-extending imperforate spring-loops lying in a single plane within the casing]. M. G. DeHart, Cincinnati, Ohio, assignor of one half to J. L. Gregory, Washington, D. C.
- 772,636. Vehicle tire. [Solid rubber.] J. A. Swinehart, Akron, Ohio.
- 772,651. Vehicle or other wheel [with solid rubber tire and a special rim]. S. T. Felmler, assignor of three eighths to F. H. Wood, both of Chicago.
- 772,663. Wheel [with pneumatic tire]. H. March, London, England, assignor to H. S. Geary, New York city.
- 772,685. Cushion for horseshoes. F. Symons, Burwood, near Sydney, N. S. W., Australia.
- 772,758. Double tube tire. F. F. Thompson, Lawton, Okla.
- 772,763. Shampooing hood. W. J. H. Walters, Syracuse, N. Y.
- 772,818. Vehicle tire [comprising strips of wire cloth, cut on the bias, or of wire cloth and rubber, the interstices thereof filled with cohesive substance and the whole formed and curved with the strand of wire cloth tangent to the art of curvature]. C. Olson, Des Moines, Iowa, assignor, by mesne assignments, to Woven Wire Rubber Co., New York.
- 772,910. Nozzle for hose. H. E. McKechney, Rochester, N. Y.

*Trade Marks.*

- 43,543. Rubber hose. The Mechanical Rubber Co., Cleveland, Ohio. *Essential feature*.—The word PALLADIUM. Used since July 1, 1904.
- 43,544. Rubber hose. New York Belting and Packing Co., Limited. *Essential feature*.—The representation of a scroll consisting of a double outline figure of the letter S reversed. Used since Jan. 1, 1904.

ISSUED OCTOBER 25, 1904.

- 772,930. Vehicle wheel [with rubber tire]. B. Gastal, Pelotas, Brazil.
- 772,975. Hose coupling. L. Stuefee, Cincinnati, Ohio.
- 772,991. Fire hose protector for [street railway] tracks. F. W. Wittkowski, Des Moines, Iowa.

- 773,216. Pneumatic tire. M. M. Mills, New York city.
- 773,234. Vibratile apparatus. [For massage treatment; described in THE INDIA RUBBER WORLD, May 1, 1904—page 279.] L. Snyder, Rochelle Park, N. J., assignor to The Lambert Snyder Co., New York city.

- 773,252. Nursing appliance. [For holding an infant's bottle; illustrated on another page.] Alice Frank, New York city.
- 773,371. Fountain pen. Frances C. Brown, New York city.

ISSUED NOVEMBER 1, 1904.

- 773,588. Pneumatic tire. C. H. Pierce, Alma, Calif.
- 773,633. Solid elastic tires with fastening-strips. H. G. Fiske, assignor, by mesne assignments, to Morton Trust Co., trustee, both of New York city.
- 773,771. Vehicle wheel [adapted to use with a pneumatic tire of the Clincher type]. H. W. Adams, Jr., Chicago, assignor to Scovill Manufacturing Co., Waterbury, Conn.
- 773,825. Universal hose coupling. J. F. Thomas, Ilion, N. Y.
- 773,847. Fountain pen. J. Blair, Brooklyn, N. Y.
- 773,942. Slip-preventing device for rubber tired wheels. M. J. Kelly, Springfield, Mass.
- 773,965. Hose binder. J. J. McIntyre and H. Bagshaw, Hartford, Conn.
- 773,971. Fire extinguishing apparatus [for the interior equipment of buildings]. C. Nuhring, Cincinnati, and W. M. Thompson, Norwood, Ohio.
- 774,113. Storm shield for vehicles. J. J. Russell, Jr., Deepwater, Mo.

*Trade Marks.*

- 43,624. Rubber hose. Jewel Belting Co., Hartford, Conn. *Essential feature*.—The word GEM. Used since Jan. 1, 1904.
- 43,639. Asbestos and rubber packing. O. Säyen, Philadelphia. *Essential feature*.—The word TORPEDO. Used since Sept. 15, 1904.

ISSUED NOVEMBER 8, 1904.

- 774,196. Hose coupling. A. W. Nunn, Rochester, N. Y.
- 774,282. Ear phone. [With flexible diaphragm.] D. E. Smith, assignor to Invisible Ear Phone and Medical Co., both of New York city.
- 774,305. Hose drier. C. M. Bowman, assignor to The Rotary Fire Hose Drier Co., both of Lebanon, Pa. [Described in THE INDIA RUBBER WORLD, July 1, 1904—page 341.]
- 774,315. Wheel. [With pneumatic tire, having a metallic covering.] F. J. Fagot, Lowpoint, Ill.
- 774,386. Vaginal syringe. E. E. Hall, Chicago.
- 774,411. Vehicle wheel [with pneumatic tire]. H. W. Adams, Jr., Chicago, Ill., assignor to Scovill Manufacturing Co., Waterbury, Conn.
- 774,446. Device to prevent snoring. S. A. Moulton, Campbell, Calif.
- 774,553. Brush. S. R. Boon, Chicago.
- 774,558. Moistener for gummed surfaces. J. D. Browne, assignor of one half to G. W. Losh, both of Madisonville, Ohio.
- 774,633. Coupling for gas hose. H. Ackermann, Newark, N. J.
- 774,675. Hand stamp. H. M. Kendrick, assignor to Lamb & Tilden, both of Washington, D. C.
- 774,727. Process of reclaiming and regenerating rubber. L. T. Petersen, assignor to himself and J. F. McQuire, both of Akron, Ohio.

[Note.—Printed copies of specifications of United States patents may be obtained from THE INDIA RUBBER WORLD, at ten cents each, postpaid.]

## GREAT BRITAIN AND IRELAND.

## PATENT SPECIFICATIONS PUBLISHED.

The number given is that assigned to the Patent at the time of the application, which, in the case of the United Kingdom, is the date of filing.

\* Denotes Patents for Invention in Progress.

[ABSTRACTED IN THE OFFICIAL JOURNAL, OCTOBER 1, 1904.]

- \* 12,929 (1903). Inflatable whistling toy. W. M. Moseley, Elgin, Illinois.
- \* 12,948 (1903). Inflatable bag for abdominal massage. J. H. Powers, Providence, Rhode Island.
- 12,995 (1903). Rubber tubing for drawing beer. S. M. Lund, Bradford.
- 13,037 (1903). Elastic tire, having a spring supported rubber cover. A. Sandwith, London.
- \* 13,104 (1903). Solid vehicle tire, with means for securing it in a rim. R. M. Connable, Baltimore, Maryland.



- \*13,105 (1903). Solid vehicle tire, secured by tie wires. *Same*.
- 13,277 (1903). Golf ball [consisting of a core of cork, covered by a thickness of rubber made in two parts and cemented together, and the whole enclosed in a Gutta-percha cover]. R. Raffety, London.
- 13,306 (1903). India rubber substitute [formed of castor and other oils, nitrated as described in patent No. 21,995 (1895), and heated in contact with air at 130° C.]. G. C. Marks, London. (J. Muir and C. H. Herod, Brantford, Ontario.)
- \*13,358 (1903). Golf ball. [Gutta-percha shell filled with a composition of rubber solution, feathers, and zinc oxide, with rubber sufficient for vulcanization.] C. T. Thompson, Philadelphia.
- 13,393 (1903). Vehicle tire. [Solid, circular section; supported on a lacing of leather strips threaded through the sides of the rim channel.] G. R. G. Rowe, London.
- [ABSTRACTED IN THE OFFICIAL JOURNAL, OCTOBER 1, 1904.]
- 13,431 (1903). Vehicle tire [formed by squirting a tubular leaden mold and filling it with rubber, vulcanization being effected by immersing the mold and rubber article in an oil bath]. Christian H. Gray, Silvertown.
- \*13,451 (1903). Fountain pen. J. Blair, New York.
- 13,729 (1903). Dental sheets [formed by placing nickel wire gauze between layers of vulcanite, the whole being united by pressure between hot rollers]. C. E. Foster, Brighton, and Dental Manufacturing Co., London.
- 13,824 (1903). Pneumatic wheel [having a rubber tube between the body of the wheel and a steel tire.] O. Siebers, Dresden, Germany.
- \*13,926 (1903). Manufacture of seamless rubber gloves and like articles. C. A. Lindsay, New York.
- 13,932 (1903). Appliance for removing rubber tires from wheels. S. Nicholson and W. H. Paterson, Gore, New Zealand.

[ABSTRACTED IN THE OFFICIAL JOURNAL, OCTOBER 10, 1904.]

- 14,011 (1903). India-rubber substitute. C. E. Pensa, Paris, France.
- 14,029 (1903). Vehicle tire. [A zig-zag rib is formed on the treads of solid, cushion, or pneumatic tires, to prevent side slipping; the transverse parts of tires for heavy vehicles are thickened.] C. H. Gray, Silvertown, and T. Sloper, Wiltshire.
- 14,232 (1903). Hood for firemen, motormen, and the like. F. E. Jackson, Manchester.
- 14,314 (1903). Syringe. [For medicinal uses, or for injecting disinfectants.] G. W. Robertson, Brondesbury, Middlesex.
- 14,408 (1903). Boot heel. C. D. Morrall, Urmston, and A. Clowes, Blackpool.
- \*14,463 (1903). Disconnectable hose coupling for railway cars. E. E. Gold, New York.
- \*14,572 (1903). Pneumatic tire [with specially formed woven fabric]. P. D. Thropp and A. de Laski, Trenton, New Jersey.

[ABSTRACTED IN THE OFFICIAL JOURNAL, OCTOBER 26, 1904.]

- \*14,764 (1903). Golf ball. [Rubber wound, with core of Gutta-percha, metal, hard rubber, or clay.] K. V. Painter, Cleveland, Ohio.
- \*14,773 (1903). Hypodermic injector. O. A. Elias, London. (W. Warren, Detroit, Michigan.)
- 14,914 (1903). Repair patch for pneumatic tires. A. E. Terry, Redditch, Worcestershire.
- \*14,947 (1903). Device for molding, vulcanizing, and finishing boots and shoes made of rubber or the like. Henry J. Doughty, Providence, Rhode Island.
- \*14,948 (1903). Device for molding, vulcanizing, and finishing boots and shoes made of rubber or the like. *Same*.

[The last two patents mentioned relate to the machines for making rubber shoes for which patents were issued to Mr. Doughty in the United States, March 17, 1903.]

#### PATENTS APPLIED FOR—1904.

Space is given here only to Applications for Patents on Inventions from the United States.

- 20,951. Philip W. Pratt, London. Improvement in elastic treads. Sept. 29.

#### GERMAN EMPIRE.

##### PATENTS GRANTED.

- 156,562 (Class 15c). Rubber covered pantagraph. C. Mierisch, Leipzig. Oct. 12.

- 156,592 (Cl. 63c). Elastic tire. R. S. Graham, New York, and W. M. Perkins, Brooklyn, United States. Oct. 12.

##### DESIGN PATENTS GRANTED [GEBRAUCHSMUSTER].

- 233,011 (Class 30f). Elastic massage hammer, with hollow rubber ball at either end of head. G. Dittmar, Washington, United States. Sept. 21.
- 233,381 (Cl. 71b). Rubber lift for boot heels. J. Baer, Diebenhofen. Sept. 28.
- 233,553 (Cl. 47d). Rubber, Gutta-percha, or Balata belt, with inserted metallic chains. E. Kniepert, Lobau. Sept. 28.
- 233,803 (Cl. 15i). Copying sheet of cotton stuff covered with rubber. R. Hartmann, Chemnitz. Oct. 5.
- 234,119 (Cl. 70b). Penholder with rubber bolts for securing the pen. J. W. Seifert, Beerfelden. Oct. 5.
- 233,890 (Cl. 71a). Elastic and pneumatic heel. J. Schmidt, Paris, France. Oct. 5.
- 234,680 (Cl. 9). Shaving brush with rubber handle. Frau Jean Schramm, Nürnberg. Oct. 12.
- 234,739 (Cl. 30d). Elastic stocking. Frau Albin Benndorf, Zeulenroda. Oct. 12.
- 234,330 (Cl. 30k). Clyster tube, convertible into a vaginal syringe by pushing a cap over it. Hannoversche Gummi Kamm Co., A.-G., Hannover-Limmer. Oct. 12.
- 234,331 (Cl. 30k). Clyster tube, convertible into a vaginal syringe by screwing a cap over it. *Same*. Oct. 12.
- 233,994 (Cl. 71b). Sole protector. A. Sander, Harnburg. Oct. 12.
- 235,089 (Cl. 30d). Elastic girdle of one piece of knit material with in-laid overspun rubber threads. W. J. Teufel, Stuttgart. Oct. 19.
- 235,130. (Cl. 45). Horseshoe with rubber pad. R. Sievers, Westdorf. Oct. 19.

##### APPLICATIONS.

- 8,657 (Class 63c). Elastic tire. A. von der Stichelen, Ghent, Belgium. Sept. 28.
- 12,486 (Cl. 63c). Tire with air chambers lying one within another. A. Chambolle, Bordeaux, France. Oct. 19.

#### THE FRENCH REPUBLIC.

##### PATENTS ISSUED (WITH DATES OF APPLICATION).

- 342,817 (May 3). R. H. Croninger. Vehicle tire.
- 342,844 (April 7). C. Motz. Vehicle tire.
- 342,876 (May 5). P. Eichmann. Mold for outer covers of pneumatic tires.
- 342,925 (May 6). Société Dollfus & Noack. Continuous circular ribs for pneumatic tires.
- 343,021 (May 13). E. Carrau. Tire, with puncture preventing cloth insertion.
- 343,224 (May 19). J. Renard. Device for use in the manufacture of grooved, rubber covered wooden flanges, for mounting tires.
- 343,324 (May 24). Depoix. Puncture preventing compound for pneumatic tires.
- 343,478 (March 7). L. P. C. Salavy. Non burstable pneumatic tire.
- 343,483 (March 30). A. J. Durupt. Puncture covering composition for pneumatic tires.
- 343,501 (May 27). C. W. Maxon. Pneumatic tire.
- 343,537 (May 30). E. Montecuccoli. Vehicle tire.
- 343,636 (June 1). L. A. Laniel. Pneumatic tire with protected outer cover and resistant flanges.
- 343,657 (June 2). A. Couturier. Cover for pneumatic tires.
- 343,768 (June 7). J. P. Legrand. Interior support for the air chamber of tires.
- 343,769 (June 7). G. F. Butterfield. Rubber soles for attachment to leather shoes.
- 343,847 (June 10). E. Midgley. Reinforced pneumatic tire cover.
- 343,865 (June 10). E. Sachetti. Armored pneumatic tire.
- 343,942 (June 13). L. Babert. Detachable anti skidding device for pneumatic tires.
- 344,017 (June 16). Société Michelin et Cie. Protected felloe for automobile wheels.
- 344,027 (June 16). A. Von Hasperg. Device for preventing the bursting of automobile tires.
- 344,028 (June 16). A. Von Hasperg. Device for preventing the bursting of automobile tires.

[NOTE.—Printed copies of specifications of French patents may be obtained from R. Bobet, Ingenieur-Conseil, 16 avenue de Villiers, Paris, at 50 cents each, post paid.]

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## RUBBER PLANTING AND EXPLOITATION.

## EXTENT OF RUBBER PLANTING IN CEYLON.

A YEAR ago there was summarized in these pages a statistical showing, from that standard publication, the "Ceylon Handbook and Directory, 1903-04," of the extent of rubber planting in Ceylon. The total acreage then reported was 11,630, of which it was stated that more than half had been planted within two years. It was also stated that "more than half the acreage referred to represents the planting of rubber among tea." There is now at hand the issue of the "Ceylon Handbook" for 1904-05, from which it appears that the total planting of rubber has increased to 36,235 acres, of which no less than 10,034 acres are devoted to rubber alone, the remaining area representing tea and other estates interplanted with rubber, with the idea that the latter ultimately will form the only growth on the land.

No estimate can be given of the number of rubber plants now under cultivation. Last year the best information pointed to the existence of 3,500,000 to 4,000,000 trees on plantations. Assuming all the exclusively rubber fields to contain 200 trees to the acre—and this appears to be the minimum—we have upwards of 2,000,000 trees, to say nothing of the 26,201 acres on which rubber has been planted, at widely varying distances, among other crops. With three times the total acreage reported a year ago, it would seem a reasonable assumption that the number of trees has at least been doubled. The following details have been compiled from the last "Ceylon Handbook":

## RUBBER PLANTING IN CEYLON, JUNE 30, 1904.

DISTRICTS.	A RECAP.	
	Rubber Alone.	Rubber Planted with Other Crops
Alagala .....	71	219 Tea
Ambagamuwa .....	7	510 "
Dolosbage .....	8	430 "
Dumbara .....	74	623 "
Galagedara .....	68	157 Cocoa
Galle & Udagama .....	365	380 Tea &
Hantane .....	12	163 "
Haputale .....	70	157 Cocoa
Kalutara .....	2,705	4,204 Tea
Kegalla & Polgahawela .....	159	1,766 "
Kelani Valley .....	1,709	8,440 "
Kurunegala .....	313	....
Kuruwita .....	204	1,005 Tea
Maskeliya .....	7	637 "
Matale East & Laggala .....	122	1,831 Tea, Cocoa
Matale North .....	115	922 "
Matale South .....	84	289 Tea
Matale West .....	610	1,695 Tea, Cocoa
Monaragala .....	332	361 "
Nilambe .....	80	679 Tea
Passara .....	31	404 "
Low Country Minor Districts	2,700	....
All Other .....	188	1,329 Tea, etc.
Total .....	10,034	26,201

In Galle district. In Kegalla district. In addition to 740 Rubber trees not otherwise specified.

A comparison of the above table with one presented in these pages in November, 1903, shows an increase in the total acreage in rubber in Kalutara from 2357 to 6909, in the Kelani valley from 4100 to 10,149; in the Matale districts from 481 to 5868; and soon. —Last year *The Tropical Agriculturist*, which issues the "Ceylon Handbook," presented figures to indicate that the

planting of rubber in the Straits Settlements was little, if any less in extent than in Ceylon. From reports that have reached THE INDIA RUBBER WORLD from various sources meanwhile, there is reason to believe that the increase in rubber planting in the Straits during the year probably has been as great as in Ceylon. —A visitor to THE INDIA RUBBER WORLD offices as these lines are being written is of the opinion that at least 20,000,000 rubber plants are now under cultivation in Ceylon and the Straits Settlements (including the Federated Malay States).

## MEXICAN MUTUAL PLANTERS CO.

Plantation "La Junta," Sanborn post office, state of Vera Cruz, Mexico. Offices: —Lumber Exchange, Chicago, Ill., U. S. See THE INDIA RUBBER WORLD, May 1, 1904—page 222.

AN informal meeting of investors in this company, with an attendance of about 125, was held in Chicago on September 27, when Mr. James C. Harvey, the plantation manager, who happened to be in the city, addressed them on the progress made on the plantation to date, and gave a statement of the results hoped for, and of the reasons therefor, all of which is reported, to have been very satisfactory to his audience. Mr. Harvey had with him some specimens of rubber obtained by tapping 108 five year old rubber trees on his private plantation, near La Junta, and he supplied details regarding the yield per tree and estimated cost of production, according to which the yield of more mature trees ought to afford a satisfactory profit.

## THE NORTH AMERICA RUBBER CULTURE CO.

[Plantation "Columbia," near Santa Lucrecia, canton of Jachitan, state of Oaxaca, Mexico. Office: New York Life building, Kansas City, Missouri.]

A RECENT bulletin issued to the investors in this company reported that the 270 acres of old planting of rubber (work was begun two years ago) made a good showing, and that 150 acres additional had been planted this year. The present plans relate to the planting of 120 acres next year and 180 acres each in 1906 and 1907. The organization of the company remains the same as stated in an article on its plans in THE INDIA RUBBER WORLD, August 1, 1901 (page 321).

## TABASCO PLANTATION CO.

[Plantations in the states of Vera Cruz and Tabasco, Mexico. Offices: —Lumber Exchange, Minneapolis, Minnesota.]

THIS company has been named in THE INDIA RUBBER WORLD hitherto [April 1, 1903—page 325] in connection with its work in the development of the "San Miguel" rubber plantation, in Tabasco. The company has since acquired "La Oaxaqueña" plantation, in Vera Cruz—mentioned in THE INDIA RUBBER WORLD, July 1, 1900 (page 287) as being developed by La Oaxaqueña Plantation Co. For the present the energies of the company will be devoted to the further development of "La Oaxaqueña," under the management of Mr. George E. Davis, who has been identified with that estate from the beginning. The secretary of the company writes to THE INDIA RUBBER WORLD, referring to both estates:

We have planted about 800 acres of rubber trees, and intend to plant several thousand more, planting as many trees each year as circumstances will permit. We are developing a large sugar plantation at Oaxaqueña, as we have between 7000 and 8000 acres of very fine sugarcane land and have cleared there 4300 acres of land. We are now planting sugarcane for nurseries, etc., and have in about 300 acres. We have employed the Honolulu Iron Works Co., of Honolulu, to engineer and construct our sugar factory, which will have an ultimate capacity of 2500 tons of cane per day. We do not know that you are interested in this branch of our enterprise, but as it is all one thing with us, we deem it



proper to call your attention to it. We intend to push the rubber end of the plantation improvement vigorously also. In addition we are engaged in the cattle business, having 12,000 head of cattle on the plantation now and about 6000 acres of cattle pastures developed.

#### RUBBER AND TEA IN CEYLON.

IF by what a correspondent tells us [says *The Times of Ceylon*] be not exaggerated, some few estates in Kalutara and Kelani Valley will, before many years have passed, have to decide whether they intend to continue cultivating tea or rubber, so thickly has the latter been planted, at all events in certain fields. We take it, however, that when the time comes to decide this knotty point, it will not be so difficult as it might be to-day. Rubber ought not to interfere very greatly with the yield of tea till past its third year, and the great bulk of the rubber in those two districts is not yet as old as that, so far at all events as the trees planted through the tea are concerned. That the decision will have to be made sooner or later by all those who have planted rubber 15 X 15 through their tea is certain enough, for land cannot permanently carry two products, if one of those is rubber. But there will be time enough to settle the question later on.

#### SELANGOR RUBBER CO., LIMITED.

THIS company was floated in Great Britain in 1899, with headquarters at Glasgow, with £26 000 capital, in £1 shares, all of which has been issued. The company purchased 5600 acres, north of the Klang river, in Selangor, for £6000. After selling 200 acres to the government for an experimental garden, Mr. W. W. Bailey, the company's manager, advised the purchase of 591 acres adjoining, which was done. The sellers elected to take a considerable part of their payment in shares, at £2 10s. each, for which purpose, and to provide additional working capital, the capital of the company was increased by £4000, making a total of £30,000 [= \$145,995]. Shares have been known to change hands at a price as high as £3 2s. 6d. A Colombo newspaper mentions a well known Ceylon planter as holding 6000 shares of this company, for which he has refused £3 per share, and several important members of the Straits government are reported to hold shares. [See THE INDIA RUBBER WORLD, May, 1904 (page 272), and September 1, 1904 (page 409).]

#### TO PLANT RUBBER IN NICARAGUA.

EL Rey Rubber Plantation Co. was incorporated October 7, 1904, under the laws of Massachusetts, with \$500,000 capital. The list of incorporators includes Alfred C. Adler, of Waltham, Mass., whose interest in "La Victoria" and "El Triunfo" rubber plantations, at La Paz, Nicaragua has been reported hitherto in THE INDIA RUBBER WORLD. Owing to the results attained on the plantations mentioned, their owners have received many applications to be allowed to join them, and the new company has organized to develop a plantation on lands purchased from Mr. Adler and his associates. The rubber species to be planted is *Manihot Glaziovii*, the rubber of the Brazilian state of Ceará. The offices of the new company are located in the Penn Mutual building, Boston.

#### CIE. BRUXELLOISE POUR COMMERCE DU HAUT CONGO.

THE accounts for the fiscal year ended May 31, 1904, presented at the annual meeting on October 12, show a deficit of 35,644.16 francs, which, added to last year's deficit, makes a total of 116,157.66 francs. In making up the report all rubber in store in Africa or in transit was figured at cost. During the year 18,406 kilograms of rubber were collected, against 1582 kilograms last year, and still better results are expected in future. A favorable result is expected in a suit against the Société Forestière et Commerciale du Haut Congo, which will

give the company control of new stations, with facilities for an increased production of rubber from *lianes*. The operations of the company are on the Lulonga and Kwango rivers.

#### BRIEF MENTION.

THE Orizaba Rubber Plantation Co. (Chicago), operating in the state of Chiapas, Mexico, were awarded a gold medal for the display of crude rubber, cacao, etc., from their plantation, made at the St. Louis World's Fair.

=Through an oversight which is regretted, the name of the treasurer of the recently incorporated Nicaragua Rubber Co. was incorrectly given in the last INDIA RUBBER WORLD (page 35). The name should have been printed Charles M. Crocker; his address is No. 41 Lafayette place, New York.

#### A YACHTING CRUISE UP THE AMAZON.

THE steam yacht *Virginia* sailed from New York at noon on November 15, for a three months' cruise in southern waters, the chief objective points being Pará and Manáos, on the Amazon river. The yacht was chartered for the purpose by Mr. E. C. Benedict, commodore of the New York Yacht Club, head of the banking firm of E. C. Benedict & Co., and a director and member of the executive committee of the United States Rubber Co. The remaining members of the party were as follows:

Mr. William M. Ivins, of the legal firm of Ivins, Kidder & Melcher; a former partner in W. R. Grace & Co., merchants with important South American interests; and at various times counsel for the United States Rubber Co. and Rubber Goods Manufacturing Co.

Mr. J. Howard Ford, a director in the United States Rubber Co.

Mr. Edward M. Backus, sometime United States consul at Pará and subsequently engaged in the Amazon rubber trade, and as representative at Manáos of various American interests; at present *concessionaire* for wireless telegraphy on the Amazon.

Mr. Charles W. Keep, a broker, and one of the oldest members of the New York Stock Exchange.

Mr. Russell G. Colt, son of President Colt, of the United States Rubber Co.

Dr. John F. Gains, of the Hahnemann Hospital, New York.

Mr. L. D. Huntington, of the New York Stock Exchange.

Mr. Charles F. Hastings.

Mr. Richard Arthur, private secretary to Mr. Ivins.

Master Melville Truesdale, son of President Truesdale, of the Delaware, Lackawanna and Western railway.

The party expected to touch at Bermuda, Martinique, and Barbados on the way south. The *Virginia* is due to arrive at Manáos in time for the formal installation of the wireless telegraphy service to Pará, by the American Wireless Telegraph and Telephone Co., mentioned already in THE INDIA RUBBER WORLD. The cruise may be continued up the Amazon as far as Iquitos, Peru—about 2000 miles from the seaboard. Returning, the *Virginia* may drop down the Atlantic coast to Rio and Buenos Aires, and later, on their way home, spend a few days in the West Indies.

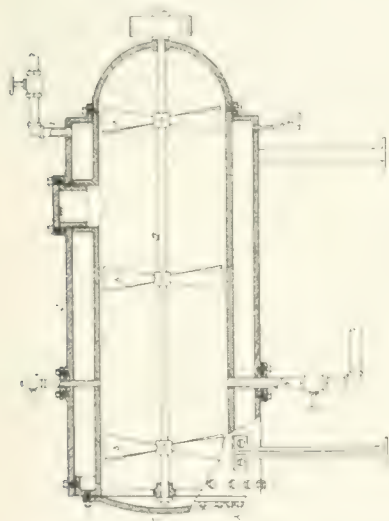
It is understood that the voyage to the Amazon is not undertaken altogether as a pleasure trip; the close connection of several members of the party with American rubber interests suggests naturally that a prolonged visit to the most important rubber producing region of the world may have in view the promotion of those interests. Commodore Benedict, besides being a director in the United States Rubber Co., sustains a similar relation to the General Rubber Co., a subsidiary corporation created for supplying the manufacturing company's very large requirements in crude rubber direct from the primary markets.

## PETERSEN'S RECLAIMING PROCESS.

A NEW process of reclaiming rubber is the subject of United States patent No. 774,727, granted to Ludwig T. Petersen (Akron, Ohio). The specification points out that the practice of reclaiming rubber hitherto by chemical processes has involved a liability to impair the strength of the rubber, while it has been practically impossible to work reclaimed rubber without the addition of new rubber of a character adapted to soften the mixture and act as a flux, to prevent the formation of lumps or blisters during the process of milling. It is pointed out that alkalis at the high temperature requisite for destroying the fibers in worn out rubber goods have a tendency to destroy the caoutchoucine present in the rubber, and thus hardening it. The new process is designed to effect both the removal of the fiber and the devulcanization of the rubber, without attacking this necessary oil.

Petersen's process consists in subjecting shredded or ground rubber waste to the action of an alkaline solution raised only to a boiling temperature, but preferably under hydraulic pressure to insure permeation, whereby the fiber is converted into soluble form or cellulose hydrate. The caustic solution being removed, the remaining mass is subjected to an aqueous solution containing a small percentage of hydrocarbon or oxyhydrocarbon, such as phenol, under high temperature and pressure, whereby any remaining alkali is combined, the rubber devulcanized, and the resulting product rendered easily workable.

A suitable apparatus for the process is indicated in the patent drawing. The rubber waste is placed within a double



walled cylinder, having the necessary steam and hydraulic connections, a caustic solution being added. Steam being admitted to the jacket to raise the contents of the cylinder to the boiling point, power is applied to a rotatable shaft armed with paddles or blades for the purpose of stirring the contents of the cylinder. Next hydraulic pressure is applied to the interior of the cylinder for securing the thorough permeation of the mass, and the conversion of the

fiber into cellulose hydrate, after which the mass is placed in a centrifugal drier to remove the soda solution. The mass is then returned to the cylinder, with a dilute solution of a hydrocarbon—as a 1 to 10 per cent. solution of phenol. Steam is again admitted to the jacket to create a temperature within the cylinder of 300° to 375°F., insuring a pressure of 50 to 175 pounds. Following the latter treatment, the rubber mass is washed, dried, and milled for working in the usual manner.

Associated in interest with Mr. Petersen in securing this patent is John F. McGuire. Both were until recently in the employ of The B. F. Goodrich Co. (Akron). It is reported now that they are seeking to organize a company for the exploitation of the new patent, and that encouraging promises of capital have been secured.

So far as is apparent from the specification, the only novelty in the process described is the limiting of the temperature in

the first stage to the boiling point. The assertion that rubber as reclaimed under the existing practice is workable only with the addition of new rubber, would indicate that the inventor's library of compound books has not been brought up to date. To the Akron correspondent of THE INDIA RUBBER WORLD Mr. Petersen said, of his process:

"It is somewhat similar to the process already patented by Mr. A. H. Marks, the inventor of the process used by the Alkali Rubber Co. here, but yet it is different in many respects. I do not care to explain the difference."

In regard to a published rumor that the Goodrich company might bring suit to establish a claim to the new invention, on the ground that it was developed in the course of work done under their direction and at their expense, Mr. Petersen stated that he had nothing to say.

## MANUFACTURE OF RUBBER NIPPLES.

A SPINDLE for forming rubber nipples for nursing bottles is the subject of United States patent No. 772,161, granted to Charles E. Longden, assignor to The Falcon Rubber Co. (New Haven, Connecticut). The shorter figure in the illustration gives a side view of a nipple constructed on such a spindle, partially broken away at the open end. The other figure is a side view of the spindle with the nipple removed. The object of the invention is to form spindles whereby "seamless" nipples having an inwardly extending rib may be produced. The spindle is formed at its outer end corresponding to the form of the desired nipple, the spindle being dipped repeatedly into soluble rubber until the requisite thickness is attained. By the use of a spindle with a groove, not only is the nipple provided with an inwardly extending rib—to enable the nipple to more closely grip upon the neck of the bottle—but the groove also forms a guide for the operator in forming the rib, so that the nipples are always of the same length, and therefore give a better appearance when packed in boxes for the market, than when they vary in length, as must be the case when made in the ordinary manner, without such guide.



## LIMITING JOBBERS' SELLING PRICES.

AT the annual meeting of the American Hardware Association, at Atlantic City, New Jersey, on November 17, Mr. George Reuter, Jr., general manager of the American Wringer Co., spoke on the methods of distribution employed by his company. As reported by the New York *Commercial*, he said:

"After several years of ruinous competition, our machine became so unprofitable to the jobbers that we decided the only way to afford him a profit was to limit the price at which he could sell our goods. This we did on February 1, 1902. Although alone in this move, we had the coöperation of a majority of the jobbers, and therefore met with great success, and the limited price system proved most satisfactory for two years, and it no doubt would have been equally successful this year, but for the fact that the very high cost of crude rubber necessitated three advances in prices of wringers within four months.

"Some jobbers, having old stocks, could not resist the temptation of turning paper profits into cash, and other manufacturers did not limit their jobbers as to prices; therefore there has been more or less irregularity in prices this year, but I still have the greatest faith in a maintenance of price system for the sale of standard goods. It takes from the catalogue house the strongest weapon it now has, and benefits all business men, be they retailers, jobbers, or manufacturers."



## THE "SWEATING" OF CONGO RUBBERS.

TO THE EDITOR OF THE INDIA RUBBER WORLD: Since the publication of my letter in your journal of October 1 (page 3) I have had numerous letters from different parts of the world referring to the same, many of them asking questions regarding crude rubber. I think the best way to answer them is through the same medium as before, which I do as follows:

When criticizing Congo rubber, I do so from a manufacturer's point of view only. The great trouble with which the factory has to contend is that the quality is not constant; neither is the elasticity. To-day we are paying anywhere from 80 to 97 cents a pound for the grades known as "tresses," Laporé, Aruwimi, etc. Practically speaking, as far as the manufacturer is concerned these are all in the same family, and are used in the same way, dried and seasoned in the same temperature, and so on. Now we buy, say 10 tons of "tresses"; they are clean, have a beautiful appearance, and a very small shrinkage, say 5 to 8 per cent. The results are highly satisfactory, and we call upon our broker for some more. He informs us that he has some of the same lot, actually the same. Again we buy, and we have a feeling that we are all right, and that this last lot will fully equal the first, but some day our foreman informs us that the goods are not curing well, don't look well, don't feel as good as usual, and in short, that something is wrong.

We commence to investigate, and we gradually work back, through the curing process, mill room, compound room, reclaiming department, and finally the washhouse. We ask the foreman here if there is anything wrong with the rubber; he says "No," but we investigate for ourselves, and we note that here and there in the drying room the sheets are falling; the temperature is correct, but the rubber is not. Upon examination of a fallen sheet, at the fracture, we find it quite soft and mushy; *it shows decomposition*. Upon opening up a bag, we see evidences of the rubber having sweated. Now I am not quite sure that "sweated" is the correct term; of course I can only look at it from the factory end, as I mentioned before, and here is the way the whole thing appears to me.

The *latex* is gathered into a receptacle and a process of coagulation is carried out, either with the aid of chemicals or heat; sometimes, as we read it, it is with aid of the heat of the human body, etc., and I think that it is right here that the trouble commences; the coagulation is not perfect, not absolutely complete. The edges of the receptacle are allowed to retain non coagulated *latex*, and this is smeared more or less on the balls, etc., of the correct article; this I should imagine is not noticeable at the time, owing to the whole mass being more or less sticky, consequently it passes. It is now baled up and starts on a long journey to Europe, and during the voyage this non coagulated mass begins to "sweat" and decompose. On its arrival the rubber is found to be "more or less sticky"; that is, the non coagulated mass has resolved itself into a soft sticky mass, resembling some of the rubber substitutes.

Of course this may be caused by exposure to the sun, but owing to general appearances, I am not inclined to that theory. That this "sticky" mass shows decomposition is easily proved by the absence of elasticity, also the absence of any swell or expansion when dissolved in benzene.

In conclusion, I think that if some of the men who are responsible for the first stages could visit some of the factories

in America or Europe, they would quickly be able to figure out the why and wherefore of these troubles and so eliminate them. Yours truly,

A. D. THORNTON.

General Superintendent, The Canadian Rubber Co. of Montreal.  
Montreal, Canada, Nov. 14, 1904.

## A MODEL MOLDED GOODS DEPARTMENT.

NO other rubber factory in the world has so large or so thoroughly organized a department for the manufacture of molded goods as has The B. F. Goodrich Co. (Akron, Ohio). The illustration herewith shows one end of the press room, in which there is a battery of 200 hydraulic presses, all built for and equipped to turn out small work. These presses are run in three sections, the division turning on the temperature



THE GOODRICH MOLDED GOODS DEPARTMENT.

maintained in each. They are set so that all of the piping is easily within reach, thus avoiding any unnecessary lifting of the molds, while behind each press is a pipe through which fresh air is forced, driving away the heat and the fumes that usually conspire to make the workman's task exceedingly disagreeable. In connection with this press department is a completely equipped machine shop where new molds are made, the average being about seven a day for 300 working days. The system prevailing through this department is ideal and has resulted in so large a business that recently another department of 50 presses has been added, with the prospect that that also in time will undergo notable growth.

## THE NEGLECT OF BICYCLE TIRES.

[FROM "THE BICYCLING WORLD," NEW YORK.]

PRACTICALLY all of the manufacturers who make automobile tires also make bicycle tires. A number of them are spending considerable sums in national mediums in advertising the automobile tire. The fact should suggest that they might help their business, and incidentally the cycling interests, did they in ever so small a way include in such advertisements the mere fact that they make bicycle tires also.

ONE of the attractions of the grounds of Girard College, in Philadelphia, during the past summer, was a "rubber forest," comprising eighteen fine specimens of *Ficus elastica*, of unusual size for greenhouse plants of this species.

## RECENT RUBBER STATISTICS.

## RUBBER PRODUCTION OF LAGOS.

THE details which follow are derived from the annual report on the British colony of Lagos, in west Africa. Prior to 1894 the recorded exports of rubber from Lagos did not exceed £6 8s. in value. Beginning with that year the amount of rubber exported annually for ten years, as recorded in the custom house, has been as follows:

	Pounds.		Pounds.
1894.....	5,867	1899.....	1,993,525
1895.....	5,209,503	1900.....	596,332
1896.....	6,484,363	1901.....	194,277
1897.....	4,458,327	1902.....	151,446
1898.....	3,778,260	1903.....	131,311

The report says: In 1899 the collecting of rubber was somewhat abruptly checked by the death of some 75 per cent. of all the rubber trees in the country. At the same time regulations were put in force by the different native authorities to prohibit tapping the trees for a period of four years, to give some chance of recovery to the few weakly trees that survived, and to allow young ones to grow up. Of the rubber exported since 1900 a part has come from beyond the Lagos territory, but probably the greater portion of it is rubber that has been collected in violation of the restrictions imposed. In 1903 it was found by expert examination of the forests that a considerable quantity of rubber could in the latter half of the year have been collected in some of the provinces; but, after mature deliberation, the authorities concerned decided to leave the trees untapped for one year more, having been assured that they would thereby obtain a better harvest. It was also arranged that collectors should in future be licensed, taught, and registered, so that a more scientifically correct method of collection should take the place of the destructive, ignorant, and reckless procedure practised formerly.

## RUBBER PRODUCTION OF THE GOLD COAST.

THE annual report for 1903 on the Gold Coast colony (which adjoins Lagos) indicates a revival in the production of rubber. At one time it was feared that a permanent decline had set in, due to the destruction of rubber plants, but the colonial authorities now hope that this was a mistake, and "that the disturbed state of the *hinterland* in 1900-01 was the main cause of the decline." Exports for ten years:

	Pounds.		Pounds.
1894.....	3,027,527	1899.....	5,572,554
1895.....	4,022,385	1900.....	3,452,440
1896.....	3,735,439	1901.....	1,520,009
1897.....	4,957,016	1902.....	1,599,971
1898.....	5,984,984	1903.....	2,258,981

## PERU.

THE total exports of rubber are stated, in British consular reports, at 1726 English tons for 1901; 1674 tons for 1902, and 2075 tons for 1903. —Rubber exports from Mollendo (on the Pacific coast) for three years are stated—in pounds:

	1901.	1902.	1903.
From Peru.....	33,600	67,200	69,440
From Bolivia.....	616,600	656,320	687,680
Total.....	616,515	649,600	723,520

The remainder of the Peruvian output of rubber was shipped from the eastern provinces, down the Amazon.

## ANGOLA (PORTUGUESE WEST AFRICA).

[From British Consular Reports.]

EXPORTS of rubber from Ambriz, Loanda, Benguela, and Massamedes during 1903 reached 2,678,000 kilograms—the largest since 1899, when 3,380,012 kilos were exported.—Ex-

ports of Almeida in 1903 were 68,000 kilos, in addition to the above figures; exports in 1899 were 123,371 kilos. The increased exports from this section apparently are due to increased means for reaching remote supplies, together with the higher prices of rubber.

## A HANDY BOOK OF RUBBER FIGURES.

THE firm of Alden, Symington & Co., India-rubber merchants (London), have rendered a genuine service to the trade by issuing a little book, under the title "Pará Statistics and Parity Tables," designed for ready reference in connection with prices, stocks, etc.

In the first place a table is given of equivalent prices of crude rubber—in English and American money per pound, and francs and marks per kilogram. These tables begin with rubber at 6 pence [=12½ cents] and, including fractional prices, proceed to 5s. 6d. [=51.33¾], with the corresponding prices in francs and marks. The little table herewith is introduced only to illustrate the idea; the complete list in the book gives equivalents for 300 different quotations. Besides, in the book, the English prices are given in the first column:

PER POUND.			PER KILO.			PER POUND.			PER KILO.		
CENT.			FRANCS.		MARKS.	FRANCS.	S.	D.	FRANCS.		MARKS.
65	2	81	7.40		6.00	95	3	11	10.25		8.80
70	2	10½	8.00		6.50	100	4	1½	11.83		9.25
75	3	1	8.55		6.93	105	4	3½	12.00		9.70
80	3	3½	9.12		7.40	110	4	6½	12.54		10.20
85	3	5½	9.68		7.85	115	4	8½	13.10		10.63
90	3	8½	10.26		8.30	120	4	11¼	13.65		11.10

Alden & Symington's book next contains statistics of the Pará rubber receipts, by months, for a number of years; the world's visible supplies, month by month; and Liverpool prices of Pará sorts. Each table includes blank spaces, in which future stocks and prices may be entered, to the end of 1909. A few figures have been compiled from the book, relating to the world's visible supply of Pará rubber and Liverpool prices, as follows:

	1900.		TONS.		PRICE.
Highest stocks, end of February.....	5513				46.6½
Lowest stocks, end of September.....	2216				45.3½
	1901.				
Highest stocks, end of March.....	5177				3.71½
Lowest stocks, end of August.....	2239				3.81½
	1902.				
Highest stocks, end of March.....	5723				3.1½
Lowest stocks, end of September.....	2596				3.1½
	1903.				
Highest stocks, end of March.....	4558				3.9½
Lowest stocks, end of September.....	1676				45.8½
	1904.				
Highest stocks, end of January.....	3714				4.41½
Lowest stocks, end of June.....	1677				4.9½

A study of these figures will show that the course of rubber prices does not always follow the rise or decline of stocks; for instance, the price of fine rubber was the same on March 31 and September 30, 1902, although the reported visible supplies at the later date were less than half as large as at the earlier date. Another point of interest is that the lowest figure in stocks is usually reached at the same time, year after year—just before the arrival of new crop rubber—while the largest stocks, at the practical close of the crop season, also occur at about the same period annually.



## CANADA'S OLDEST RUBBER FACTORY.

THE Canadian Rubber Co. of Montreal completes this year the first half century of its existence, though if it be considered the successor of an older establishment which operated the first rubber industry in Canada, it has several years more to its credit. Not only is the company the oldest in the rubber industry in the Dominion, but it has lost none of the enterprise and progressiveness which, early in its history, gave it important standing in the ranks of rubber manufacturers. During a year past the company has spent more than \$300,000 for new machinery and various improvements of the factory, so that the whole plant is now in fine order, and other additions and further improvements are already under consideration by General Manager McGibbon.

As illustrating the improvements recently made, mention may be made of the new boiler house, which is one of the most complete in the Dominion. The following is a description of the boiler plant:

There is an equipment of Stirling water tube boilers, comprising four units of 348 HP. each, or a total of 1392 HP. The furnace gases pass through a Green economizer on their way to the stack, and draft is furnished by a 200 inch Sturtevant fan, direct connected to a horizontal engine. The feed water is supplied to the boilers by two double acting outside packed plunger pumps, built by the Canada Foundry Co., each  $6\frac{1}{2}'' \times 4\frac{1}{2}'' \times 8''$ , and it passes from these through a vertical Wainwright feed water heater, and thence through the economizer to the boilers. Two injectors are provided for use in case of emergency. Coal bunkers, sufficiently large to carry a three days' supply, open off the boiler room and are so arranged that teams can be driven over the tops of them and the loads dumped through coal holes in the roof. At the rate of  $34\frac{1}{2}$  pounds of water per HP. per hour, the boilers, running at their full capacity, would require 800.3 pounds of water per minute, or 240 United States tons per day of 10 hours. The mechanical plant is operated by a Scotch engine 20" and  $34'' \times 60''$ , giving 438 indicated HP., and one Laurie-Corliss engine 20" and  $40'' \times 48''$ , giving 700 HP.

The factories, warehouses, and general executive offices of the Canadian Rubber Co. are situated near the St. Lawrence river, in the busy manufacturing center of Montreal, and in an ideal location for receiving raw material and shipping manufactured products. The factories alone cover several acres of ground, and employ from 2000 to 3000 persons, according to the season. Extensive sales branches have been established for many years at Halifax, Montreal, Toronto, Winnipeg, and Vancouver, where large stocks of the company's products are always carried. The company deals directly with the retail trade and with the wholesale jobbing trade, and transacts a business of several million dollars a year, covering all parts of the Dominion, besides making considerable exports to other countries. Practically every class of rubber goods is manufactured by the company.

The company for many years has specialized in heavy mechanical rubber goods, and particularly in the line of large elevator belts for use in the extensive grain elevators in the Dominion. The last elevator to be equipped with belting from this company was the Canadian Pacific Railway Co.'s "B" elevator at Fort William, Ontario. All the belting used in this elevator was made to special specifications and was pronounced by experts to be one of the finest lots of elevator belting ever produced.

In rubber footwear of every style the "Canadian" brands of this company have been standard in the trade for 50 years. An

enormous business is done in heavy footwear, the requirements of the great lumbering interests of the Dominion in this respect being given special attention. The daily output of the shoe factory is over 15,000 pairs. Many special brands are made, but the product of the Canadian Rubber Co. in footwear has always been broadly identified with the word "Canadian."

Sir H. Montagu Allan is the president of the company, and the directors are all men who, for many years, have been prominent in the banking and commercial interests of the Dominion.



D. LORNE MCGIBBON.

A portrait is presented here of Mr. D. Lorne McGibbon, general manager of the company, who is one of the foremost industrial organizers of the Dominion. He gained deserved prominence among Canadian manufacturing interests some few years ago by his successful management of the Laurentide Pulp Co. (Grand Mere, Quebec), the largest pulp and paper concern in Canada. He has met with marked success in his present important position, and under his control the Canadian Rubber Co.

has made remarkable progress, in keeping with the great expansion of the Dominion. Mr. McGibbon is one of the leading members of the Canadian Manufacturers' Association, and is also identified with many other kindred organizations.

## INDIA-RUBBER GOODS IN COMMERCE.

## EXPORTS FROM THE UNITED STATES.

OFFICIAL statement of values of exports of manufactures of India-rubber and Gutta-percha, for September, 1904, and for the first nine months of five calendar years:

MONTHS.	Belting, Packing, and Hose.	Boots and Shoes.	All other Rubber.	TOTAL.
September, 1904. . .	\$ 76,273	\$193,410	\$ 178,682	\$ 448,365
January-August. . .	570,972	651,392	1,600,574	2,822,938
Total. . . . .	\$647,245	\$844,802	\$1,779,256	\$3,271,303
Total, 1903. . . .	633,744	628,592	1,855,756	3,118,092
Total, 1902. . . .	513,636	715,759	1,467,000	2,696,395
Total, 1901. . . .	447,653	567,397	1,321,115	2,336,165
Total, 1900. . . .	401,604	441,800	1,117,539	1,961,042

JAPAN.—The value of exports of India-rubber goods from the United States to Japan during recent fiscal years is thus stated in official publications from Washington:

1897-98.	1898-99.	1899-00.	1900-01.	1901-02.
\$27,924	\$42,030	\$47,580	\$114,586	\$159,100

British exports of rubber goods to Japan, for the last five calendar years, have been in value as follows—official figures stated in equivalents in American money:

1897-98.	1898-99.	1899-00.	1900-01.	1901-02.
\$120,078	\$145,793	\$121,815	\$141,909	\$129,005

CANADA.—Value of exports of manufactures of India-rubber and Guttapercha, of Canadian production, by fiscal years, and the distribution of the same:

YEARS.	United States.	Great Britain.	Other Countries.	TOTAL.
1898-99. . . . .	\$ 85,084	\$23,290	\$24,458	\$133,332
1899-00. . . . .	108,811	14,392	47,245	170,448
1900-01. . . . .	77,772	15,690	78,194	151,656
1901-02. . . . .	124,426	36,824	96,084	322,572
1902-03. . . . .	124,426	46,155	92,126	262,707
1903-04. . . . .	99,094	39,378	78,695	217,167

Exports to "Other Countries" include shipments on a liberal scale to Australia.

## A NEW ENGLAND RUBBER CLUB "SMOKE TALK."

THE New England Rubber Club plans to have at least two informal club socials a year—one in the summer, which takes the form of a picnic and dinner; and one in the fall or winter, which is usually a "smoke talk."

An entertainment of the latter class was called for the evening of November 21. It happened that Mr. Henry C. Pearson, the secretary of the Club, had recently returned from a trip to Central America and had become possessed of a number of photographs illustrative of the region visited, in consequence of which he was summoned by the executive committee, and persuaded to tell the story of his trip, accompanied by stereopticon views.

The spacious assembly room at the American House, in Boston, was chosen as the place of meeting, and it served the purpose admirably. The Club had its own coat room, ample space for the social half hour that preceded the lecture, excellent seating, and later plenty of room at the luncheon tables, and a most appetizing lunch.

The story of the trip to the wild *Castilloa* lands in the peninsular of Azuero was listened to for two hours without an apparent break in the interest. Eighty-two views were shown, embracing the city and suburbs of Colon, views along the Panama canal, old and new Panama; Toboga, Gubernador, and Cebaco islands; scenes in the wild lands, embracing views of mountains and plains, primitive camps, natives, together with glimpses of the ancient towns of Las Minas, Pesé, Chitre, and so on.

\* \* \*

THE secretary of the Club then announced that he had been requested by certain of its members, who were extensive manufacturers, to bring to the attention of the Club a matter which might ultimately have an important bearing upon the interests of the whole trade.

It was reported that the municipal government at Pará had applied for permission from the federal government, at Rio de Janeiro, to convert a certain public park in Pará into city property, upon which should be built an *entrepoto* or depôt where all rubber landed at Pará should be weighed, graded, and made ready for shipment; that the local government then planned to make a decree granting a concession to certain parties, probably not citizens of Brazil, who should receive all of this rubber, grade it, distribute it, and have the right to put upon it an additional tax, beyond the export duty of 22 per cent. already assessed; that the British minister at Rio, being informed of this, had laid the matter before his government; that the Hon. Thomas C. Platt, a United States senator of New York, had laid this matter before the department of state at Washington, with the result that the department had promised to communicate with Rio; and that the matter had otherwise been brought to the notice of the Washington government. It was further stated that a somewhat similar concession had once been either proposed or actually granted at Pará, and that the British government had made vigorous protestations against it, on the ground that it tended to make a monopoly against the interests of British commerce, and the matter was dropped. There was thus afforded a precedent for such action by the United States government at this time as should fully protect its citizens, at least to the extent that no privileges or rights, detrimental to their own, should be granted by the Pará government to citizens of any other country.

It was, therefore, suggested as advisable that a committee of rubber manufacturers be formed, to bring further representations before the United States department of state, through their senators and congressmen, to the end that the interests of American citizens be not discriminated against or otherwise jeopardized by means of any concession that might be granted at Pará. The committee to be appointed, it was specifically stated, should not be a committee of the New England Rubber Club, which is a purely social organization, but should include rubber manufacturers in other parts of the United States. It was also stipulated that the committee raise and disburse its own funds, and elect its own officers.

The following committee was then nominated, and elected by the Club: L. D. Apsley, chairman; Augustus O. Bourn, vice chairman; E. E. Wadbrook, B. G. Work, James Bennett Forsyth, C. C. Converse, A. W. Stedman, John H. Flint, John Hopewell, F. C. Hood, Joseph Davol, A. M. Paul, E. S. Williams, and Henry C. Pearson. F. H. Jones, No. 50 Bromfield street, Boston, was named as temporary secretary.

\* \* \*

THIS business being transacted the audience were introduced to the viands, to which they did ample justice. Ex Governor A. O. Bourn presided throughout the evening, as President Apsley was called away at the last moment by important business. A list of the Club members who were present follows, besides whom there were about fifty guests:

F. H. Appleton.	John H. Flint.	Leo. F. Nadeau.
Horace P. Allen.	W. M. Farwell.	Harry H. Noyes.
Hon. Augustus O. Bourn.	W. H. Gleason.	Henry Nickerson.
C. J. Bailey.	B. F. Good.	Geo. E. B. Putnam.
Ira F. Burnham.	Fred C. Hood.	E. B. Pearson.
Winslow H. Chadwick.	A. N. Hood.	Henry C. Pearson.
Frank T. Carlton.	Freeman Hunt.	John S. Patterson.
R. L. Chipman.	E. S. Hyatt.	W. H. Palmer.
Charles A. Coe.	E. D. Hewins.	Robert L. Rice.
W. C. Coleman.	G. Edw. Habich.	A. F. Solberry.
J. O. DeWolf.	F. H. Jones.	S. P. Sharples.
R. L. Dorr.	E. Jacoby.	A. W. Stedman.
J. Frank Dunbar.	Robert Josselyn.	A. M. Stickney.
C. F. Edgerton.	George W. Knowlton.	Alonzo P. Spear.
H. P. Fuller.	James H. Learned.	Thomas J. Skinner.
James Bennett Forsyth.	Frank L. Locke.	H. D. Scott.
Thomas A. Forsyth.	Max Lowenthal.	Joseph C. Stedman.
	Fred. L. Morse.	F. W. Veazie.
	H. F. Mayo.	George P. Whitmore.
	Henry C. Morse.	

## RUBBER TRANSPORT IN FRENCH SUDAN.

A LETTER to *Le Temps* (Paris) from the French Sudan says that hitherto the transportation of Caoutchouc from Sikasso (a center of great importance) to Banmakko, whence it was carried to Kayes by rail and to St. Louis, on the coast, by river steamer, was by means of carriers or donkeys. The load of a carrier was 30 kilograms, and the price paid 6.50 to 7.50 francs, the journey of 340 kilometers [=211 miles] occupying a fortnight. A donkey could carry 90 kilograms, but the time was longer, and the cost no less. The average cost, therefore, is put down at 250 francs [= \$48.25] per ton. Now that a road for mule carts has been opened from Sikasso to Bimakko, it is estimated that cart loads of 300 kilograms will be carried through in 15 days, at a cost not exceeding 100 francs [= \$19.30] per ton.



## NEWS OF THE AMERICAN RUBBER TRADE.

## MECHANICAL RUBBER MANUFACTURERS' ASSOCIATION.

A REGULAR meeting of the Mechanical Rubber Manufacturers' Association of the United States will be held on Thursday, December 1, at 10.30 A. M., in the Astor dining room of the Waldorf-Astoria, in New York. The by laws provide for regular meetings on the first Thursdays of October, December, February, April, and June of each year. The details of the plan of organization were reported in the last issue of THE INDIA RUBBER WORLD, on page 59.

## THE NEW FACTORY AT JAMESTOWN.

THE Amazon Rubber Co. (Jamestown, New York), the incorporation of which was reported in this Journal on September 1 (page 429), reported recently that they were progressing well with the installation of their machinery, and hoped to begin manufacturing by December 1. It is their intention to make solid, cushion, and pneumatic tires; mats, matting, tiling, and other mechanical goods. Charles H. Walters is general manager of the company.

## ELECTRIC RUBBER MANUFACTURING CO.

THE incorporation of this company, with \$1,000,000 capital, under New Jersey laws, was reported in THE INDIA RUBBER WORLD November 1, 1903 (page 59). The company on October 11, 1904, filed at Trenton amended articles of incorporation, by the terms of which \$200,000 of the capital stock is to be 7 per cent. cumulative preferred shares of \$100 each, and the remaining \$800,000 in common shares of \$100. The registered offices are at No. 1 Montgomery street, New Jersey. James H. George is president and Charles H. George secretary, but neither of these has been identified with the rubber business. Under date of November the secretary wrote: "The purpose of the company is to manufacture rubber specialties, but it has not yet finished its experiments. Our experiments may take six months more."

## A SOUTHERN DRUGGISTS' SUPPLY HOUSE.

DURING the past year the Baltimore firm of Miller Brothers, jobbers of rubber druggists' sundries, have added several lines, and are now importing tooth brushes, hair brushes, glassware, etc. Their trade is with druggists and hospitals, over the southern states, as far as and including Florida. Their stock is not excelled, in respect to extent or variety, by that of any druggists' supply house south of New York, as one may be convinced by an examination of the new catalogue which they are circulating in the trade. The firm was established in January, 1892, and is composed of Joseph C. and L. Dudley Miller, the former of whom was sometime manager of the druggists' sundries department of the Baltimore Rubber Co. After the recent great fire in Baltimore Miller Brothers secured a new location, No. 209 West Camden street.

## BISHOP GUTTA-PERCHA CO. (NEW YORK.)

It has not been generally known that H. E. Blitz, named as president of the Bishop Gutta Percha Co. (New York), on the letterheads of that company, was Mrs. Helen E. Blitz. Attention was called to the fact, however, by the death of this lady at her home in Westfield, New Jersey, on October 22. She was a relative of the wife of the late Samuel C. Bishop, who gave his name to the company in 1857, and in 1860 established its factory at the present location in East Twenty-fifth street, New York. After the death of Mr. Bishop, in 1872, the business was continued under the direction of his widow, with the

assistance of Mrs. Blitz, who also had become a widow. Upon the death of Mrs. Bishop in 1881, Mrs. Blitz, by the collateral wills of Mr. and Mrs. Bishop, who had no direct heirs, inherited one quarter of their estate, including the Bishop Gutta-Percha works, and upon the organization of the present Bishop Gutta-Percha Co., in 1885, she was elected a director. She became its president in 1894, and held that office until her death. The remaining directors of the company are Amos A. Browning, Ellen I. Anderson, William Boardman Reed, and Henry A. Reed. William Boardman Reed, the vice president, will, under the company's by laws, act as president until the annual meeting in January. The secretary and treasurer of the company is Henry A. Reed, who has been in active charge of the company's affairs for the past seventeen years, succeeding William W. Marks, who had been superintendent of the factory for 40 years, having been connected with Stephen T. Armstrong in the manufacture of the first Gutta-percha goods made in America. The present superintendent of the factory is Harry D. Reed.

## THE TORONTO GUTTA PERCHA COMPANY.

THE Gutta Percha and Rubber Manufacturing Co. of Toronto, Limited, following the destruction of their warehouses by fire in April last, were forced, through inability to lease satisfactory warehouse property in the city, to try the experiment of shipping goods direct from their factory. This change led to the transfer of their shipping staff from the city office. The new arrangement has worked so well that the company have decided to make it permanent, and with this in view are erecting a new warehouse on lands recently bought adjacent to the factory. A new building, to comprise four stories and basement, is to have a frontage of 180 feet on O'Hara avenue, and width of 52 feet, with an extension 132  $\times$  52 feet, standing at right angles. The triangle between these two wings will be occupied by a one story and basement shipping building, and a special railway siding. Mill construction will be used, and there are to be two elevators, two staircases, large vaults, etc., all outside of the buildings proper. In the meantime, for office purposes the company have brought three freeholds on the southeast corner of Yonge and Wellington streets, Toronto, giving them a frontage of 60 feet on Yonge and 90 feet on Wellington. These properties have been rebuilt, and the company are about to occupy for offices and salesrooms the corner and Wellington street frontage. The building is gray stone, with five stories and basement. The balance of the property the company will not occupy for the present, and it probably will be leased until such time as it may be required by the growth of their business. The company have also bought recently ten brick houses near the factories as the nucleus of a settlement for their operatives.—The company have engaged a New York concern, who use a sandblast process, to clean the walls of the stone structure mentioned above as having been secured for their offices at Yonge and Wellington streets.

## A NEW SINGER CORPORATION.

THE Singer Sewing Machine Co. has filed articles of incorporation with the county clerk at Elizabeth, New Jersey, with capital stock of \$1,000,000. The incorporators are Douglas Alexander and Thomas E. Hardenburgh, of New York, and Charles Coleman, of Englewood. The Singer Sewing Machine Co. is to be the distributing agent for the Singer Manufacturing Co.

## AMERICAN RUBBER SHOES IN CANADA.

At a meeting of the Rubber Boot and Shoe Jobbers' Association held in Toronto since our last report [says *The Canadian Shoe and Leather Journal*] the matter of the members of the association agreeing to handle Canadian rubbers only was again discussed. The manufacturers had requested that the members of the Jobbers' Association pass a resolution agreeing to confine themselves to the product of Canadian factories. The consensus of opinion among the jobbers present at the meeting was that they could without any disadvantage to themselves agree to handle Canadian rubbers only. The one or two firms who take exception to the proposal, while not desirous of specializing on American lines nor handling them extensively as long as they can make more money out of the Canadian product, have an eye to future possibilities. As one jobber stated, "While it is not probable that it will ever be more advantageous for us to handle American goods, there may arise some unusual circumstance whereby the foreign goods could be brought in and handled here at a greater profit than our goods, and we want to be in a position to take advantage of it; that's what we are in business for." The discussion resulted in the passing of a clause whereby the members of the association have agreed to give Canadian goods the preference.

## THE DIAMOND RUBBER CO. (AKRON, OHIO.)

THIS is a corporation organized under the laws of West Virginia. The statement which follows was filed November 4, 1904, with the commissioner of corporations of Massachusetts, as required of foreign corporations, by the laws of that state, in connection with which the corresponding details filed a year ago are stated:

ASSETS.		
Real estate .....	\$ 402,436.50	\$ 506,278
Machinery .....	520,571.83	577,335
Merchandise .....	243,624.09	350,865
Manufactures, materials, etc. ....	372,727.39	192,915
Cash and debts receivable .....	572,856.52	626,560
Patent rights .....	52,000.00	52,000
Stocks in other corporations .....	256,100.00	6,100
Total .....	\$2,420,316.33	\$2,312,053
LIABILITIES.		
Capital stock issued .....	\$1,701,000.00	\$1,701,000
Accounts payable .....	7,546.32	2,745
Floating indebtedness .....	241,138.34	123,597
Surplus .....	128,600.00	477,972
Pay roll to October 1 .....	....	6,739
Profit and loss .....	342,031.67	....
Total .....	\$2,420,316.33	\$2,312,053

## A PROPOSED NEW CANADIAN FACTORY.

THE Peterboro Rubber Co., Limited, has been registered in Canada, with \$500,000 capital, for the purpose of engaging in the manufacture of hard and soft rubber goods at Peterboro—a town which, on account of the water power available, is becoming an important manufacturing center. The incorporators are: Louis T. Vance, of Marion, Indiana; H. E. Address, Akron, Ohio; Robert Bailey, Bowmanville, Ontario; Edward Valentyne and F. Cohen, Toronto. It is understood that the capital is to be supplied principally from Chicago and Peterboro, and to some extent from Akron. Mr. Vance, who was formerly employed by The B. F. Goodrich Co., and was later superintendent of a rubber plant in Marion, Indiana, has been elected president and treasurer, and Mr. Bailey, secretary. They form the directorate, with the addition of F. M. Atterbolt, of Akron. Mr. Address is an Akron lawyer who has been active in connection with the incorporation of the new company.

## RUBBER GOODS MANUFACTURING CO.

At a meeting of the directors in New York on November 22, the twenty-third regular quarterly dividend of  $1\frac{3}{4}$  per cent. on the preferred shares of the company was declared, payable out of current earnings, on December 15, to holders of record of December 6, 1904. Checks will be mailed to registered addresses.

## PROSPECTIVE ADVANCE IN LEATHER BELTING.

THE eighteenth annual convention of the Leather Belting Manufacturers' Association was held on November 16, at the Fifth Avenue Hotel, New York. Twenty-five firms were represented. Several papers on topics of interest to the trade were read and discussed, and in the evening there was a banquet. The officers were reelected: Edward P. Alexander, of Philadelphia, president; Edward H. Ball, of Chicago, vice president; George H. Blake, No. 28 Ferry street, New York, secretary and treasurer. Mr. Blake has served continuously as secretary since the Association was started. It was voted not to revise the list prices on leather belting, which have been in force since 1901, though the sentiment of the meeting was that it would be proper for belt manufacturers to secure an additional 5 or 10 per cent. on finished belting, on account of the higher prices which they are paying for leather. Such advances as may be made, therefore, will be obtained by changing discounts, by manufacturers acting each for himself.

## RUMORED REDUCTIONS ON TABLE OILCLOTHS.

RUMORS have been current in the trade that the independent table oilcloth concerns would make a reduction of 20 cents per yard on all table oilcloth on and after December 1. The so called independent concerns include Thomas Potter, Sons & Co., the Trenton Oilcloth and Linoleum Co., The George W. Blabon Co., and the United Oil Cloth Co. It is understood that the Standard Table Oil Cloth Co. will announce new prices after December 1, but no intimation has been received as to the nature of any change that may be involved. The present prices of the latter company were announced March 1, 1904.

## NEW INCORPORATIONS.

BOTTLEHOT Bag Co. (New York), November 11, 1904, under New York laws; capital, \$1000. Directors: H. D. Williams, G. W. Witzell, C. B. Wever, all of New York city. The object is to market sickroom requisites, including the "Bottlehot" water bottle described in THE INDIA RUBBER WORLD, October 1, 1904 (page 17).

=The New Haven Rubber Works, Incorporated, November 10, 1904, under Connecticut laws; capital \$50,000. Incorporators: Frank E. Bradley, Montclair, New Jersey; Ernest D. Steer, New Haven, and George M. Allerton, Waterbury, Connecticut. THE INDIA RUBBER WORLD is advised: "The incorporators will organize early in 1905, at which time a prospectus will be given. The company is not antagonistic but friendly to the Seamless Rubber Co."

=Parquetry Rubber Tile Co. (Jersey City), October 22, 1904, under New Jersey laws; capital, \$300,000. To deal in rubber tiles and other rubber goods. Incorporators: George B. Covington and Bernard G. Heyn, No. 135 Broadway, New York; Nellie R. Green, Elizabeth, N. J.

=Eagle Rubber Cement Co. (Trenton), November 17, 1904, under New Jersey laws; capital authorized \$125,000. Incorporators: Adolph Buller, Emil Buller, Nevin J. Loos. It is proposed to build a factory in Trenton for making rubber cement and shoe dressing.

=Lambert Snyder Vibrator Co., November 21, 1904, under New Jersey laws; capital, \$5000. Incorporators: Stephen G.



Van Derbeck, Hackensack, N. J.; Francis V. Dobbins, Rahway, N. J.; Albert Bruns, Brooklyn, New York. The company will exploit the Snyder Health Vibrator, described in THE INDIA RUBBER WORLD, May 1, 1904 (page 279). Registered office: Hackensack, New Jersey.

=The Oxford Co. (New York), November 3, 1904, under New York laws; capital, \$1000. Directors: T. B. Graham, W. W. Adams, M. A. Peters, all of New York city. The stated object is to deal in rubber goods.

#### TRADE NEWS NOTES.

THE Milwaukee Rubber Works Co. (Cudahy, Wisconsin) are building an addition to their factory, in the shape of a two story brick building, 125 X 48 feet. The lower floor will be used entirely for their solid vehicle tire work, and the management feel that when it is fully equipped they will have one of the finest vehicle departments in the country. They are also adding a two story building, 30 X 42 feet, to be used as a shipping room and storeroom. The building of these additions has been rendered necessary in order to enable the company properly to take care of their increasing business.

=At a meeting of the board of directors of the India-Rubber and Gutta-Percha Insulating Co. (Yonkers, New York), held October 19, 1904, a dividend of 2½ per cent. on the capital stock was declared, was payable November 1. The last preceding dividend was for 2½ per cent., payable July 11, 1904.

=The Fisk Rubber Co. have removed their branch house at Buffalo, New York, to No. 893 Main street, in that city, where Mr. D. T. Keenan will continue in charge as manager.

=The Buffalo (New York) branch house of the Hartford Rubber Works Co.—James How, manager—has been removed to No. 688 Main street.

=G & J Tire Co. (Indianapolis, Indiana) issue a series of views of automobiles, of leading makes, which have won in recent notable racing contests, the same having been equipped with the company's new "Thread Fabric" tire, described in another column of this Journal.

=The control of the patents for the manufacture and sale of the "Everstick" rubber footwear in the Dominion of Canada has been acquired by the Canadian Rubber Co. of Montreal. The Adams & Ford Co. (Cleveland, Ohio) control these patents for the United States. These rubbers were described in THE INDIA RUBBER WORLD, June 1, 1904 (page 311).

=The Manufactured Rubber Co. (Philadelphia) are reported to be very busy at their rubber reclaiming plant at Metuchen, New Jersey, which of late has been running day and night.

=The Goodyear Rubber Co.'s branch house at Portland, Oregon, has been removed to a new building, at Fourth and Pine streets. The Portland *Oregonian* says: "This to-day is one of the most important of Portland's great wholesale houses. It is one of the largest and best arranged jobbing houses for sale and distribution in the United States."

=Mr. Lloyd L. Libby, for several years connected with the executive offices of the Canadian Rubber Co. of Montreal, has gone to Halifax, Nova Scotia, to manage the same company's extensive sales branch at that place. The territory covered extends from Campbellton, New Brunswick, to the Atlantic Coast, including Newfoundland.

=The factory of the Trenton Oilcloth and Linoleum Co. (Trenton, New Jersey) was damaged by fire on the evening of November 2 to an extent reported at \$40,000, which loss is understood to be fully covered by insurance. The president of the company is George R. Cook, who is also treasurer and general manager of the Eureka Rubber Manufacturing Co. of Trenton, N. J.

=The sale is reported of the premises occupied by the Concord Rubber Co. (Concord Junction, Massachusetts), while that company was in existence, to Charles L. Hill, but the disposition to be made of the property is not stated.

=The board of trade of Lawrence, Massachusetts, has appointed a committee to consider a proposition from Loring M. Monk, of Sharon, Mass., to establish a rubber shoe factory in Lawrence, in the event of a certain amount of local capital being subscribed. Mr. Monk, who was associated formerly with W. L. Sage & Co., jobbers of rubber footwear in Boston, is reported to have secured an option on unused factory premises in Lawrence owned by the American Woolen Co.

=A review of local trade in the Omaha (Nebraska) *Bee* of November 13 says: "The rubber goods trade boomed last week owing to the colder weather and snow that visited many sections in the west. Orders came in by mail, telephone, and telegraph, and jobbers were obliged to work their men overtime to get their orders filled promptly, as all of them were marked 'rush'."

=Referring to the Catasauqua Rubber Co. (East Catasauqua, Pennsylvania), mentioned in the last INDIA RUBBER WORLD, local newspapers report the installation of a steam power plant in the premises to be occupied as a factory.

=The factories of the United States Rubber Co. were closed from Wednesday evening, November 23, until Monday morning November 28, to permit their employes to observe the Thanksgiving holidays, many of them thus having an opportunity to visit relatives at distant places.

=C. J. Bailey & Co. (Boston) have licensed the following firms to manufacture the Bailey "Won't Slip" automobile tires, in "clinch" and single tube patterns: The B. F. Goodrich Co., The Diamond Rubber Co., and The Fisk Rubber Co.

=The Hood Rubber Co. (Boston) have issued a series of five panel pictures which are excellent artistic advertising. Three of them pertain to boots and impress separate views of a deep-water fisherman, a postman, and a farmer; one illustrates the "Pilgrim" heel on a ladies' rubber through the presentment of an attractive young lady, and another shows the Plymouth school shoes on the feet of a typical schoolboy.

=A contract for the supply of 5000 pairs of rubber boots, for the United States army, has been awarded, under a bid received November 15, at the Boston depot of the Quartermaster's department, at \$2.74 per pair.

=Mr. James Morris Carroll, known in Australia, West Africa, and the Far East, has become manager of systems and advertising of the Canadian Rubber Co., of Montreal, and secretary to Mr. D. Lorne McGibbon, general manager of that company. "Morris" Carroll crossed Siberia from St. Petersburg to Port Arthur soon after the Transsiberian railway was completed, and ten years ago was one of the first 500 men to reach Coolgardie, the center of the great West Australian gold rush, where he spent some three years. He has visited Japan twice, and strongly believes that the future of the East as a market for Canadian and American manufactures is one of the coming "good things."

=One of the features of the B. F. Sturtevant Co.'s new office building at Hyde Park, Massachusetts, is the lunch room located in the basement of the building. Arrangements were first made with a caterer to furnish lunches, but the desire for home lunches became so prevalent that the company now hires the help and furnishes lunches at cost.

=Worcester Rubber Co. (Worcester, Massachusetts) were mentioned in the local newspapers as having been damaged by a recent extensive fire in that town. Mr. A. H. Bloss, proprietor of the business, informs THE INDIA RUBBER WORLD that

the fire was confined to neighboring stores and that his only loss was \$400, due to the flooding of his basement.

=At the state election in New Jersey on November 1 the successful candidate for governor was Edward C. Stokes, who was mentioned in the last issue of *Rubber World* as having been attacked by the Rubber Workers' Union of Trenton on account of his attitude toward the rubber workers' strike last winter, while an officer of one of the rubber manufacturing companies in Trenton. On the morning of election day the newspapers published a "Final Appeal of Rubber Workers" signed by officers of the Trenton union, repeating the attacks upon Mr. Stokes. Prior to that date one Mulken, a reputed prominent labor unionist, was solicited by the political party opposed to Stokes to get at the facts regarding the latter's attitude to the strike. With the result that he (Mulken) made a report extenuating Stokes. Now Mulken is being attacked by labor interests (it being asserted that he is neither a member of a union, and that he was working in the interest of Mr. Stokes's election). It is not intimated that the result of the election will be affected by the tempest in a teapot now in progress in labor union circles.

# NEW YORK STOCK EXCHANGE TRANSACTIONS

## UNITED STATES Rubber Co.:

DATES.	Close.			Range.		
	Sales.	High.	Low.	Sales.	High.	Low.
Week ending Oct. 20 10,100	34	27 1/2	27	2,000	34	30
Week ending Oct. 27 7,000	27 1/2	27 1/2	27	2,400	34 1/2	30
Week ending Nov. 3 4,100	27 1/2	27 1/2	27	1,700	34 1/2	30 1/2
Week ending Nov. 10 11,000	34 1/2	35	34	4,000	34 1/2	30 1/2
Week ending Nov. 17 20,000	34 1/2	35	34	7,000	34	30 1/2
Week ending Nov. 24 10,000	34 1/2	34 1/2	34	4,000	34 1/2	30

## RUBBER Goods Manufacturing Co.:

DATES.	Close.			Range.		
	Sales.	High.	Low.	Sales.	High.	Low.
Week ending Oct. 20 8,000	24	20	19	1,000	24 1/2	19
Week ending Oct. 29 3,260	24 1/2	24 1/2	24	900	24	20 1/2
Week ending Nov. 3 3,000	24	24 1/2	24	500	24	20 1/2
Week ending Nov. 12 2,200	24 1/2	24 1/2	24	300	24	20
Week ending Nov. 19 17,000	24 1/2	24 1/2	24	500	24	20
Week ending Nov. 26 1,000	24 1/2	24 1/2	24	200	24 1/2	20

# PERSONAL MENTION.

MR. EDWARD VALENTINE CAREY, a rubber planter from Selangor, Federated Malay States, who was mentioned in Mr. Pearson's recent series of letters from the Far East, has lately been a visitor to the United States, taking occasion to spend a few days at the St. Louis World's Fair. Mr. Carey will spend some time in Europe, and on finally reaching his home in the Malay states will have completed a tour of the globe. Mr. Carey was for seven years chairman of the Selangor Planters Association, and afterward for four years chairman of the United Planters' Association of the Federated states.

=The Hon. L. D. Apsley, president of the Apsley Rubber Co. (Hudson, Massachusetts), and Mrs. Apsley spent Thanksgiving day with Mr. Apsley's father, George Apsley, at Lake Haven, Pennsylvania, who is 87 years of age. The employees of the Apsley company were not forgotten in the absence of the president, each receiving a handsome card of Thanksgiving greetings, enclosed within which was enough money for the purchase of a turkey.

=Monsieur Alfred Grisar, of Antwerp, who visited the United States recently, crossing the continent and stopping for a few days at the St. Louis World's Fair, on reaching his home during November, completed a two years' tour of the world.

It amounted to an experience of the Kingdom of Madagascar, an ancient rubber producing territory of Africa, and a journeyed two to the rubber plantations at Fianarantsoa and the Manakanto. These Mr. Grisar reports they considered extremely fruitful and profitable, his tour being a success, owing to the warm welcome he received for his membership in the Madagascar Antwerp rubber trading firm of Grisar & Co.

=Colonel James M. Reed, for the past year United States consul at Paris, France, is a member of several of the most distinguished French clubs, and is a member of the French Academy.

It is reported that Charles Henry E. Conover, president of the United Rubber Sales Co., will erect a Rubber Storage building in Maunabo, Massachusetts, adjoining the Maunabo Automobile Road, which was built by the Phoenix Hotel.

# DEPARTING ARTIST.

JOHN WYATT, formerly of the Rubber and Rubber Goods Co. of the Marine Rubber Co. (Boston), a rubber merchant of Boston, Indiana and Columbus, Ohio, died in the latter city on October 24 at the age of 46. He is survived by a wife and a daughter, and two sons, the two latter, Albert R. and William R. Wyatt, who have been associated with him in business. Mr. Wyatt was engaged in the rubber business since 1870 in Columbus for 35 years, and settled in Columbus five years ago, establishing with his two sons and Dr. W. L. Lister, the business above mentioned.

=James J. Wilkinson, a retired manufacturer, died at his home in Mount Vernon, New York, on November 1. He was long established at No. 101 Canal street, New York city, where the premises were burned out in March, 1903. In the fire, when hard rubber jewelry was a huge manufactured goods, all his possessions were lost, including his materials, tools, rubber factories; later he turned his attention to farming and retired.

=John A. Green, formerly local manager of Portland, Oregon, of the Pacific Coast Rubber Co., died on November 10 at consumption, aged about 40 years. He had a well known up the day before, but postponed signing it until next morning, when it was too late.

=Moses Beninger, president of the Brunswick-Balke-Conender Co. (New York), manufacturers of elevator systems and the equipment, died on October 24 at French Lick Springs, Indiana. Heart failure, following a slight stroke, caused death.

=John E. Terrell, of Trenton, New Jersey, who died suddenly on November 24, was the father of William E. Terrell, Trenton, the work of whose hands in building machinery for rubber work has made him well known in the trade.

=John Kaslow, for more than 20 years the publishing secretary of all the various rubber organizations which have succeeded one another at Saratoga, New York, died at heart failure on November 20, after a brief illness and was buried at Saratoga.

=Joseph E. Baumgardner, a prominent dry goods merchant of New York, who died on November 24, was the son of Joseph of Connecticut, Rubber and Rubber Co., Bridgeport, New Jersey, for three years from April, 1903.

A expectation that India-rubber will become an important product of the Egyptian Sudan is included in the annual report of the government in making recommendations in regard to it. The official *Journal* (January, September, 1904) contains an announcement that "a quantity" of not more than 10,000 tons of rubber, 10 per cent. of which will be made rubber, will be exported to the district, on a fixed condition to be submitted that will be time by the government. For the present, the maximum will be 10,000 tons, and the value fixed at £100,000 per annum, (£100,000's per 100 pounds).



## A CARD FROM MESSRS. PIRELLI &amp; CO.

TO THE EDITOR OF THE INDIA RUBBER WORLD: We note in the November issue of THE INDIA RUBBER WORLD an extract of the paper read by our Mr. E. Jona at the International Electrical Congress at St. Louis on "Insulating Material in High Tension Cables." Also, under the heading "The Italian Trade" (page 40), we note our name favorably mentioned, and for all this we beg to tender best thanks. With reference, however, to the above mentioned paragraph on Italian trade, we wish to call your attention to a few statements therein contained which are evidently due to some misapprehension.

We do not think there is any important rubber article which is not manufactured by us, with the exception of rubber shoes; but anyhow, even if there is, this is certainly not due to any fiscal reason, as the Italian import tax is the same for all rubber articles of a single group, and there certainly is no whole group of articles which is not manufactured here.

As to tires, the duty on them has never been altered and was, from the first day, 60 centimes per kilo (less than 6 cents per pound). As you see, it is certainly no prohibitive tariff. Elastic thread we manufactured since 1880, and our yearly production so far exceeds the requirements of the home market that we have always done a large export trade all over Europe.

It may interest you to know that the cable specially manufactured by us for 50,000 volts working pressure, to which our Mr. Jona alluded in his paper, was tested in our works up to 150,000 volts without any break in the insulation.

We do not doubt that you will take these remarks of ours into consideration, and again thanking you, we remain, dear Sir, Yours truly,

PIRELLI &amp; CO.

Milan, Italy, November 15, 1904.

## AN OLD COMB FACTORY CLOSED.

THE manufacture of combs in America was begun by Enoch Noyes, in a very crude way, at West Newbury, Massachusetts, some time prior to the revolutionary war. After the surrender of Burgoyne, in 1777, a Hessian soldier who had belonged to his forces, and who had worked at comb making in

his native land, entered the employ of Noyes, who profited from the skill of the soldier, and from some tools in the latter's knapsack. The comb factory became very important, in time, and the industry was taken up by others, until West Newbury came to have no fewer than 33 comb shops. The factory established by Noyes remained in the family, and in 1855 was operated under the style of S. C. Noyes & Co., when Somerby N. Noyes, a great grandson of the founder of the business, became a member of the firm. On October 22, 1904, Somerby Noyes, who had become the sole owner of the factory, died in a Boston hospital, and on that day the factory closed. The business is to be continued, however, having been purchased, one month prior to Mr. Noyes's death, by the W. H. Noyes & Brother Co., who will combine it with their comb factory at Newburyport, Mass. Somerby N. Noyes was born March 14, 1836, and invented a number of machines for the development of the horn comb industry, but on account of the introduction of India-rubber, celluloid, and other materials for combs, the line of manufacture to which he was devoted has become relatively less important.

## A QUART OF RUBBER SYRUP.

ANDREW JACKSON BANTA, for fifty-seven years a shoe clerk in a store in Rochester, N. Y., in commenting the other day on rubber prices [says *The Shoe Retailer*], recalled the interesting fact that when he first began life as a shoe clerk the rubbers worn were of pure gum, and the soles were a half inch thick.

"I can remember that they looked just like blocks of wood," said Mr. Banta. "They came stuffed with hay or seagrass. This we had to pull out and insert a last instead. After being placed on the last we would varnish them and place them on the shelves for sale. One day a man came into the store and put his feet upon the fender of the stove. The fire was hot, and after a while he began to smell something burning. Taking his feet from the stove he found that the rubber had melted and that about a quart of pure gum had formed a pool under the stove. Just think of all the rubbers one quart of pure gum would supply nowadays."

## REVIEW OF THE CRUDE RUBBER MARKET.

WE have again to report higher prices for crude rubber, of all sorts, than have ever before been quoted in these columns. A higher tendency has prevailed throughout the past month, with the result that Islands fine Pará now figures at 13 cents higher than at the beginning of November and Upriver at 14 cents—for new crop. Even higher prices have been reported than appear in the tables below. Madeira fine has been sold to arrive at \$1.31. One importing house reports: "We have sold in a very moderate way at \$1.30, and hear reports of \$1.31@1.32." The unprecedented price of \$1 is reported for African rubber and sales are believed to have been made at even higher rates. Although arrivals at New York have been liberal, stocks remain exceptionally small.

All indications point to still higher prices, especially if the winter should prove of such a character as to stimulate largely the production of rubber footwear.

Arrivals at Pará (including Caucho), at last advices, compare with the same months of previous years as follows:

	1901	1902	1903	1904
July .....	1260	1290	1280	1240
August .....	1240	1370	1230	1250
September .....	1940	1670	2010	1810
October .....	2610	2280	2440	2460
November .....	2970	2650	2980	a 2320
Total, five months.	10,100	9260	9940	9430
[or To November 1904.]				

## NEW YORK RUBBER PRICES FOR OCTOBER (NEW RUBBER).

	1901	1902	1903	1904
Upriver, fine .....	1.12@1.17	1.00@1.09	74	@79
Upriver, coarse .....	86@90	82@91	60	@64
Islands, fine .....	1.09@1.14	96@1.06	72	@74
Islands, coarse .....	61@65	56@68	46	@49
Cametá, coarse .....	61@65	56@67	47	@49

In regard to the financial situation, Albert B. Beers (broker in India rubber, No. 68 William street, New York) advises us:

"During November there has been a fairly good demand for paper at rates ruling about the same as in October, namely 5 @ 6½ per cent. for the various grades of rubber notes, though early in the month rates were somewhat easier, and transactions were made at 4½ per cent."

Following is a statement of prices of Pará grades, one year ago, one month ago, and on November 30—the current date.

PARÁ.	Dec. 1, '04.	Nov. 1, '04.	Nov. 30, '04.
Islands, fine, new....	92@ 93	112@ 113	125@ 126
Islands, fine, old.....	@	none here	none here
Upriver, fine, new.....	95@ 96	115@ 116	129@ 130
Upriver, fine, old.....	97@ 98	none here	none here
Islands, coarse, new....	55@ 56	64@ 65	72@ 73
Islands, coarse, old.....	@	none here	none here
Upriver, coarse, new.....	79@ 80	88@ 89	96@ 97
Upriver, coarse, old.....	@	none here	none here
Caucho (Peruvian) sheet.....	60@ 61	67@ 68	71@ 72
Caucho (Peruvian) ball.....	71@ 72	77@ 78	82@ 83

The market for other sorts in New York, shows an important advance on all grades, as follows:

AFRICAN.	CENTRALS.
Sierra Leone, 1st quality 95 @96	Esmeralda, sausage... 83 @84
Massai, red..... 95 @96	Guayaquil, strip..... 71 @72
Benguella..... 72 @73	Nicaragua, scrap... 79 @80
Cameroon ball..... 65 @66	Panama, slab..... 61 @62
Accra flake..... 35 @36	Mexican, scrap..... 80 @81
Lopori ball, prime.... 98 @99	Mexican, slab..... 61 @62
Lopori strip, prime.... 94 @95	Mangabeira, sheet... 49 @58
Ikelemba..... 99 @100	EAST INDIAN.
Madagascar, pinky... 83 @84	Assam..... 90 @91
	Borneo..... 40 @41

#### Late Pará cables quote:

	Per Kilo.		Per Kilo.
Islands, fine.....	7\$500	Upriver, fine.....	8\$250
Islands, coarse.....	3\$900	Upriver, coarse.....	5\$750
Exchange, 12 $\frac{1}{2}$ d.			

#### Last Manáos advices:

Upriver, fine.....	8\$600	Upriver, coarse.....	5\$900
Exchange, 12 $\frac{1}{2}$ d.			

#### Statistics of Para Rubber (Excluding Caucho).

NEW YORK.				
	Fine and Medium.	Coarse.	Total 1904.	Total 1903.
Stocks, September 30.....	38	6 = 44	97	108
Arrivals, October.....	670	410 = 1080	868	893
Aggregating.....	708	416 = 1124	965	1091
Deliveries, October.....	703	412 = 1115	883	917
Stocks, October 31....	5	4 = 9	82	174

PARÁ.				
	1904.	1903.	1902.	
Stocks, Sept. 30.....	373	240	86	218
Arrivals, October....	2660	2381	2300	793
Aggregating.....	3033	2621	2386	1011
Deliveries, October....	2868	2276	2241	900
Stocks, October 31	165	345	145	111

ENGLAND.				
	1904.	1903.	1902.	
Stocks, Sept. 30.....	373	240	86	218
Arrivals, October....	2660	2381	2300	793
Aggregating.....	3033	2621	2386	1011
Deliveries, October....	2868	2276	2241	900
Stocks, October 31	165	345	145	111

	1904.	1903.	1902.
World's visible supply, October 31....	1921	2372	3038
Pará receipts, July 1 to October 31.....	6611	6400	6179
Para receipts of Caucho, same dates.....	499	1484	431
Afloat from Pará to United States, October 31	736	700	554
Afloat from Pará to Europe, October 31....	900	810	915

#### London.

EDWARD TILL & Co. [November 1] report stocks:

	1904.	1903.	1902.
LONDON { Pará sorts.....	—	—	—
{ Borneo.....	30	2	115
{ Assam and Rangoon.....	4	1	4
{ Other sorts.....	498	177	319
Total.....	532	223	135
LIVERPOOL { Pará.....	111	435	1237
{ Caucho.....	140	81	82
{ Other sorts.....	524	476	580
Total, United Kingdom.....	1307	1153	2337
Total, October 1.....	1656	1661	2164
Total, September 1.....	1505	1364	2731
Total, August 1.....	1764	1781	3053
Total, July 1.....	1920	2285	3595
Total, June 1.....	1667	2248	3677

#### PRICES PAID DURING OCTOBER.

	1904.	1903.	1902.
Pará fine, hard.....	4/ 9 1/2 @ 4 1/4	4/ 2 1/2 @ 4 1/4	3 1/4 @ 3 3/4
Do soft.....	4/ 5 1/2 @ 4 1/4	4/ 6 1/2 @ 4 1/4	3 1/4 @ 3 1/2
Negroheads, scrappy.....	3/ 5 1/2 @ 3 1/2	3/ 5 @ 3 1/2	2 7/8 @ 3 1/2
Do Cameta 2/ 3 1/2 @ 2 1/2	2 3/4 @ 2 1/2	2 3/4 @ 2 1/2	2 1/2 @ 2 1/2
Bolivian.....	4/ 10 @ 4/ 11	No sales	3/ 3 @ 3/ 4
Caucho, ball.....	3/ 3 @ 3 1/2	3/ 5 @ 3 1/2	2/ 6 @ 2 1/2
Do slab.....	2/ 9 1/2 @ 2 1/2	2/ 7 @ 2 1/2	2 1/2 @ 2 1/2
Do tails.....	2/ 9 @ 3/	No sales	2/ 5 3/4

NOVEMBER 11.—The market has continued active, with an advance of 2d. per pound within a week. Sales of fine hard cure spot and November delivery at 5s. 11d. to 5s. 12 1/2d.; December-January at 4s. 9 1/4d. to 4s. 11d.; January-February, 4s. 9 1/4d. to 4s. 10 1/2d.; February-March, 4s. 8 3/4d. to 4s. 10d.; March-April, 4s. 8 1/2d. Large sales of soft cure for November delivery at 4s. 11d. to 4s. 11 1/2d. Bolivian fine quoted at 5s. 1 1/2d. A large business done in mediums, at firmer prices.

At to-day's auctions large supplies met a good demand at full to dearer rates. Cartagena good black scrap and roll 3s. 4 1/2d.; fair clean white sheet 3s. 1d. Madagascar fair pinky rather mixed 3s. 2 1/2d.; good Majunga 2s. 8d. to 2s. 8 1/2d.; Mozambique good to fine stickless sausage 3s. 10d. to 4s.; fair to good Lamu ball 3s. 4 1/2d. to 3s. 5d.; Assam, good red, 3s. 7 1/2d.

#### PLANTATION RUBBER (FROM PARÁ SEED).

October 14 Auction.—Eight cases Straits offered and sold; fine biscuits at 5s. 4d. to 5s. 4 1/2d.; thick ditto rather immature, at 5s. Two cases fine Ceylon biscuits sold at 5s. 4d.

October 28 Auction.—Ceylon: Twenty-one cases offered and 20 sold; fine biscuits at 5s. 6d. to 5s. 7d.; good scrap at 4s. 5d. to 4s. 6 1/2d.

November 11 Auction.—Twenty-eight packages Ceylon and Straits offered and sold. Fine thin Ceylon biscuits, part dark, at 5s. 8 1/4d. to 5s. 9 1/4d.; fine dark and pale Straits biscuits at 5s. 8d.; fair to good scrap at 4s. 4d. to 4s. 6 1/2d. [The highest price paid this date is equal to \$1.40 3/8 per pound. The highest price named for regular Pará rubber, same date, is 5s. 1d. = \$1.23 3/8].

#### Liverpool.

WILLIAM WRIGHT & Co., report [November 1]:

Fine Pará.—With normal receipts in Pará, small stocks in Europe and America, and a good demand from the latter country, the market has been active, both spot and forward, and prices are fully 2 1/2d. per pound dearer since the beginning of the month; there is rather more

#### Rubber Scrap Prices.

NEW YORK quotations—prices paid by consumers for car-load lots, in cents per pound—show a slight advance over the figures last reported, as follows:

Old Rubber Boots and Shoes—Domestic.....	5 3/4 @ 6
Do Foreign.....	5 1/4 @ 6 1/2
Pneumatic Bicycle Tires.....	3 1/2 @ 4
Solid Rubber Wagon and Carriage Tires.....	6
White Trimmed Rubber.....	1 1/2 @ 1 3/4
Heavy Black Rubber.....	4
Air Brake Hose.....	2 1/2 @ 2 3/4
Fire and Large Hose.....	2 @ 2 1/4
Garden Hose.....	1 3/8 @ 1 1/2
Matting.....	1 1/2 @ 1 3/4

#### Rubber Receipts at Manaos.

DURING October and four months of the crop season for three years [courtesy of Messrs. Witt & Co.]:

FROM—	1904.	1903.	1902.	1904.	1903.	1902.
Rio Purús.....	288	215	431	1197	1101	1199
Rio Madeira.....	361	254	160	1633	1609	594
Rio Jurua.....	190	158	38	465	414	260
Rio Javary—Iquitos.....	575	581	153	856	766	308
Rio Solimões.....	72	99	282	114	153	145
Rio Negro.....	15	2	4	15	17	69
Total.....	1501	1309	1068	3623	3490	3184
Caucho.....	116	87	62	334	425	321
Total.....	1617	1396	1130	3957	3918	3505



disposition to sell at the close, and importers and dealers would be only too glad to see a substantial reduction in prices, but unless the crop shows a large percentage of increase on last season, with the present—and likely to be continued—active demand, added to the extremely small stock available and, generally speaking, the paucity of stock held by manufacturers, we must be prepared to see a very high level of values right through the season. Doubtless this may be and is a matter of regret, but it is a contingency that must be faced.

*African.*—The market has been better during the month, in sympathy with Pará grades, and a large business has been done, especially in Cape Coast selected lumps at  $1\frac{1}{4}d.$  advance, and red Sierra Leone shows  $1d.$  advance, closing firm, sellers; Cape Coast lumps  $2s. 1\frac{1}{2}d.$  spot, and  $2s. 1d.$  forward, and red Sierra Leone forward sellers  $3s. 10\frac{1}{2}d.$

### Bordeaux.

PRICES NOVEMBER 11 (FRANCS PER KILOGRAM).

Soudan niggers ..... 9. @ 9.70	Cassamance, A ..... 7.50@ 7.65
Soudan twists..... 8.25@ 8.75	Cassamance, A. M. . 6.50@ 6.60
Conakry niggers, red. 10.25@ 10.45	Madagascar :
Lahou cakes ..... 7.30@ 7.50	Twists..... 4.25@ 7.25
Lahou twists..... 8.50@ 8.60	Majunga ..... 7. @ 7.25
Lahou niggers..... 8.10@ 9.30	Tamatave..... 8. @ 9.10

STOCKS NOVEMBER 11 (KILOGRAMS).

Soudan twists..... 13,532	Bassam cakes... .. 236
Soudan niggers..... 19,544	Madagascar..... 4,700
Lahou niggers..... 9,450	Other sorts..... 650
Lahou cakes..... 400	Balata ..... 2,000
Sumatra..... 3,600	
Bassam niggers..... 4,056	Total..... 58,168

R. HENRY.

### Antwerp.

TO THE EDITOR OF THE INDIA RUBBER WORLD: The tendency of the inscription sale on November 11 was a higher one, in consequence of the latest reports from the English and Pará markets. Participation was general and animated, the whole amount exposed, 384 tons, finding buyers—with the exception of 10 tons—at figures showing an average increase of 40 centimes, or 4 @  $4\frac{1}{4}$  per cent., over estimations. The highest prices were paid for the Upper Congo sorts, which usually are taken for the United States. The principal lots sold were:

	Estimations.	Sold at.
21 tons Equateur .....	10.50	11.35 @ 11.45
22 " Mongalla black strips.....	9.50	10.12½
13 " Mongalla red pieces.....	10.	10.75
5 " Lopor I.....	10.25	10.77½
14 " Lopor II.....	6.75	6.77½ @ 7.
20 " Uelé strips.....	9.75	10.12½
19 " Congo Sangha.....	8.72½	9.05
23 " Upper Congo balls.....	10.	10.50
10 " Red Congo sausages.....	10.	10.35
10 " Congo M'Poko.....	10.30	10.75

The next large sale by inscription will take place on December 16, at which time about 600 tons will be exposed. Sales since November 1 have amounted to about 400 tons. Stocks in first hands now amount to 617 tons, of which 331 tons arrived on November 7, by the steamer *Philippeville*.

C. SCHMID & CO.

Antwerp, Belgium, November 11, 1904.

### RUBBER ARRIVALS AT ANTWERP.

Nov. 8.—By the *Philippeville*, from the Congo:

Bunge & Co..... (Société Générale Africaine) kilos	97,000
Do ..... (Société Anversoise)	30,000
Do ..... (Sultanats du Haut Obangi)	13,000
Do ..... (Chemins de fer Grand Lacs)	4,000

### PARA RUBBER VIA EUROPE.

	POUNDS.
Oct. 29 —By the <i>Compania</i> =Liverpool	
George A. Alden & Co. Fine.....	17,000
A. T. Morse & Co. Coarse.....	4,500 21,500
Nov. 3.—By the <i>Osiris</i> =Liverpool:	
Poel & Arnold (Cauchó).....	24,000
Nov. 5 —By the <i>La Touche</i> =Havre:	

Poel & Arnold (Cauchó).....	16,000
Nov. 7.—By the <i>Etruria</i> =Liverpool:	
Poel & Arnold=(Cauchó).....	45,000
A. T. Morse & Co. (Fine).....	1,000 46,000
Nov. 7.—By the <i>Munipolis</i> =London:	
Poel & Arnold (Coarse).....	4,500
Nov. 9.—By the <i>Menzaneres</i> =Ciudad Bolívar:	
Thebaud Brothers (Coarse).....	2,500

Nov. 17 —By the <i>Victoria</i> =Liverpool:	
Poel & Arnold (Coarse).....	22,500
Poel & Arnold (Medium).....	5,500 28,000
Nov. 17 —By the <i>Majestic</i> =Liverpool:	
Poel & Arnold (Cauchó).....	11,500
Rubber Trading Co. (Cauchó).....	4,500 16,000
Nov. 23 —By the <i>Vacaton</i> =Colon:	
Chicago Bolivian Rubber Co. (Fine).....	30,000

Bunge & Co..... (Société "La Kotto")	2,000
Do ..... (Société Isanghi)	1,000
Société Coloniale Anversoise..... (Cie. de Lomami)	3,000
Do ..... (Belge du Haut Congo)	10,000
Do ..... (Sud Kamerun)	9,000
Do ..... (Cie. du Kasai)	80,000
Société A B I R.....	43,000
Comptoir Commercial Congolais.....	9,000
Société Equatoriale Congolaise..... (Société L'Ikelemba)	1,000
M. S. Cols..... (Société Baniembe)	1,000
Comptoir des Produits Coloniaux..... (Ekela Kadei Sangha)	27,000
Charles Dethier..... (Société Belgika)	1,000
Do ..... (La M'Poko)	500 331,500

### ANTWERP RUBBER STATISTICS FOR OCTOBER.

DETAILS.	1904.	1903.	1902.	1901.	1900.
Stocks, Sept. 30. kilos	804,482	421,858	456,711	896,143	1,004,762
Arrivals in October..	363,490	944,274	340,595	234,635	470,028
Congo sorts .....	293,005	863,240	306,228	134,777	134,417
Other sorts .....	69,885	81,034	34	45,457	35,111
Aggregating....	1,167,972	1,366,132	797,309	1,130,778	1,474,790
Sales in October....	457,112	489,495	447,171	864,673	565,743
Stocks, Oct 31....	710,860	876,637	350,138	266,105	909,047
Arrivals since Jan. 1	4,845,311	4,726,430	4,360,518	4,960,761	5,054,406
Congo sorts .....	3,995,454	4,277,003	4,134,132	4,771,041	4,298,062
Other sorts .....	849,857	449,427	337,886	189,720	756,344
Sales since Jan. 1....	4,745,351	4,507,898	4,434,084	5,308,605	4,437,440

### IMPORTS FROM PARA AT NEW YORK.

[The Figures Indicate Weights in Pounds.]

November 4.—By the steamer *Boniface*, from Manáos and Pará:

IMPORTERS.	Fine.	Medium.	Coarse.	Cauchó.	Total.
Poel & Arnold.....	121,000	25,600	112,500	2,100=	261,200
New York Commercial Co. 111,000	13,100	32,400	700=		157,200
A. T. Morse & Co.....	52,900	6,400	77,600	3,900=	140,800
General Rubber Co.....	82,700	12,000	17,200		111,900
Hagemeyer & Brunn....	21,500	1,400	3,200		26,100
Edmund Reeks & Co.....	6,600		10,900		17,500
Lionel Hageners & Co..	12,300		1,400		13,700
Wallace L. Gough.....			8,800		8,800
Total .....	408,000	58,500	264,000	6,700=	737,200

November 14.—By the steamer *Cearense*, from Manáos and Pará:

New York Commercial Co. 162,600	17,200	93,800			273,600
Poel & Arnold.....	138,600	12,000	111,200	5,900=	267,700
A. T. Morse & Co.....	42,800	7,400	56,000		106,200
General Rubber Co....	75,900	12,000	8,600	5,500=	102,000
Lionel Hageners & Co..	15,200		900		16,100
Hagemeyer & Brunn....	13,600		2,400		16,000
Wallace L. Gough.....			7,600		7,600
Safety Ins. Wire Cable Co. 5,900	1,400	300			7,600
Total, .....	454,600	50,000	280,800	11,400=	796,800

November 25.—By the steamer *Cametense*, from Manáos and Pará:

Poel & Arnold.....	262,500	38,200	111,800	2,700=	415,200
New York Commercial Co. 231,300	25,300	104,700	4,200=		365,500
General Rubber Co....	204,700	41,000	64,600	2,000=	312,300
A. T. Morse & Co.....	11,700	2,100	65,400		79,200
Edmund Reeks & Co....	47,500	3,700	8,800		60,000
Hagemeyer & Brunn....	14,800	4,300	4,200		23,300
Lionel Hageners & Co..	20,300		2,100		22,400
Thomsen & Co.....	13,900		1,400		15,300
Total.....	806,700	114,600	363,000	8,900=	1,293,200

[NOTE.—The steamer *Ana onense*, from Pará, is due at New York on December 5, with 525 tons Rubber.]

## OTHER ARRIVALS IN NEW YORK

## CENTRALS.

	POUNDS.	
OCT. 26.—By the <i>Yucatan</i> =Colon:		
G. Amstuck & Co.	14,360	
Lawrence Johnson & Co.	12,800	
Hirzel, Feltman & Co.	11,200	
Dumarest Bros. & Co.	7,500	
A. Santos & Co.	5,560	
J. A. Medina & Co.	6,000	
E. B. Strout	5,500	
Roldan & Van Sickle	4,400	
Eggers & Heinlein	2,800	
Otto Gerdahl	2,000	
Smithers, Nordenholt & Co.	2,200	
American Trading Co.	1,000	
Meyer & Hecht	800	
A. Rosenthal & Sons	700	
Isaac Brandon & Bros.	500	
R. G. Barthold	200	77,500
OCT. 27.—By the <i>Patricia</i> =Hamburg:		
A. T. Morse & Co.	2,200	
OCT. 28.—By the <i>El Cid</i> =New Orleans:		
A. T. Morse & Co.	9,000	
Manhattan Rubber Mfg. Co.	8,500	
G. Amstuck & Co.	2,500	18,000
OCT. 26.—By the <i>Jerence</i> =Bahia:		
J. H. Rossbach & Bros.	4,500	
OCT. 29.—By the <i>Havana</i> =Mexico:		
H. Marquardt & Co.	1,700	
Fred Probst & Co.	1,500	
Harburger & Stack	1,500	
E. Steiger & Co.	1,000	
Isaac Kuble & Co.	300	
E. N. Tibbals & Co.	300	6,100
NOV. 2.—By the <i>Carib II</i> =Truxillo, etc.		
Eggers & Heinlein	7,500	
A. S. Lasecelas & Co.	1,200	
H. W. Peabody & Co.	500	9,000
NOV. 2.—By the <i>Advance</i> =Colon:		
Hirzel, Feltman & Co.	12,400	
G. Amstuck & Co.	4,500	
Piza Nephews & Co.	3,000	
Gabriel Perigault	1,700	
American Trading Co.	2,000	
E. B. Strout	900	
A. Rosenthal's Sons	700	
Meyer Hecht	400	
H. Marquardt & Co.	400	
Fred Probst & Co.	500	26,100
NOV. 4.—By the <i>Flandria</i> =Santa Martia, etc.		
A. Held	3,500	
Isaac Kuble & Co.	2,500	
American Trading Co.	2,200	8,200
NOV. 2.—By the <i>Siberia</i> =Port Limon, etc.:		
A. Held	4,500	
D. A. De Lima & Co.	2,000	
Isaac Brandon & Bros.	2,200	
United Fruit Co.	2,000	
Andreas & Co.	700	
Lawrence Johnson & Co.	500	
G. Amstuck & Co.	700	12,600
NOV. 5.—By the <i>Cervantes</i> =Bahia:		
Hirsch & Kaiser	7,000	
NOV. 7.—By the <i>Etruria</i> =Liverpool:		
J. H. Rossbach & Bros.	32,000	
George A. Alden & Co.	4,500	36,500
NOV. 10.—By the <i>Cavour</i> =Bahia:		
J. H. Rossbach & Bros.	16,000	
NOV. 11.—By the <i>El Siglo</i> =New Orleans:		
A. N. Rotholz	2,000	
G. Amstuck & Co.	1,500	3,500
NOV. 12.—By the <i>Esperanza</i> =Mexico:		
E. Steiger & Co.	1,200	
Harburger & Stack	1,000	
H. Marquardt & Co.	1,000	
Graham Hinkley & Co.	800	4,000
NOV. 14.—By the <i>Comus</i> =New Orleans:		
A. T. Morse & Co.	7,500	
Manhattan Rubber Mfg. Co.	6,000	
T. N. Morgan	1,500	
A. N. Rotholz	3,500	18,500
NOV. 17.—By the <i>Advance</i> =Colon:		
Hirzel, Feltman & Co.	12,700	
G. Amstuck & Co.	9,600	
E. B. Strout	5,900	
Gabriel Perigault	3,700	
J. A. Medina & Co.	2,600	
H. Marquardt & Co.	1,000	
Meyer Hecht	600	
DeSola & Pardo	700	
Smithers, Nordenholt & Co.	700	
Silva, Bussenius & Co.	300	
Jimenez & Escobar	300	47,100
NOV. 19.—By the <i>Matanzas</i> =Mexico:		
L. N. Chemedlin & Co.	1,500	
Fred. Probst & Co.	1,000	
H. Marquardt & Co.	800	
Cia Mexico Comiso	500	
Havre, etc.	28,000	31,800

## CENTRALS.—Continued.

NOV. 21.—By the <i>Tennyson</i> =Bahia, etc.:		
Hirsch & Kaiser	7,000	
A. D. Hitch & Co.	4,000	
J. H. Rossbach & Bros.	6,500	17,500
NOV. 21.—By the <i>Umbria</i> =Liverpool:		
J. H. Rossbach & Bros.	16,000	
Poel & Arnold	16,000	32,000
NOV. 23.—By the <i>Finace</i> =Colon:		
Lawrence Johnson & Co.	3,600	
Dumarest Bros. & Co.	3,600	
A. Santos & Co.	2,800	
Gabriel Perigault	2,500	
Isaac Brandon & Bros.	2,000	
Hirzel, Feltman & Co.	1,400	
Jimenez & Escobar	1,100	
Frame & Co.	1,600	
Roldan & Van Sickle	1,100	18,900
NOV. 23.—By the <i>Yucatan</i> =Colon:		
Hirzel, Feltman & Co.	26,500	
G. Amstuck & Co.	20,000	
Dumarest Bros. & Co.	1,900	
Roldan & Van Sickle	4,000	
Lawrence Johnson & Co.	4,000	
J. A. Medina & Co.	3,900	
A. Santos & Co.	3,000	
A. M. Capens Sons	3,000	
Isaac Brandon & Bros.	2,600	
Gabriel Perigault	1,300	
John Dunn Sons Co.	1,400	
W. R. Grace & Co.	1,600	
A. Rosenthal's Sons	1,500	
Eggers & Heinlein	1,500	79,200

## AFRICANS.

	POUNDS.	
OCT. 25.—By the <i>Kroonland</i> =Antwerp:		
Poel & Arnold	23,500	
A. T. Morse & Co.	14,800	
Joseph Cantor	8,000	
Winter & Smille	22,500	68,800
OCT. 25.—By the <i>Stalendam</i> =Rotterdam:		
A. T. Morse & Co.	14,000	
OCT. 27.—By the <i>Patricia</i> =Hamburg:		
A. T. Morse & Co.	14,500	
George A. Alden & Co.	2,500	
Wallace L. Gough	2,000	
Earle Brothers	2,500	21,500
OCT. 27.—By the <i>Carpathia</i> =Liverpool:		
George A. Alden & Co.	30,000	
OCT. 28.—By the <i>Baltic</i> =Liverpool:		
General Rubber Co.	80,000	
OCT. 29.—By the <i>Campania</i> =Liverpool:		
George A. Alden & Co.	20,000	
Poel & Arnold	4,000	
Windmuller & Reolker	2,500	26,500
OCT. 29.—By the <i>Philadelphia</i> =London:		
George A. Alden & Co.	33,000	
Wallace L. Gough	6,500	
Robinson & Tallman	7,000	46,500
OCT. 31.—By the <i>Zeehol</i> =Antwerp:		
George A. Alden & Co.	185,000	
Poel & Arnold	170,000	
A. T. Morse & Co.	26,000	
Joseph Cantor	5,000	
Rubber Trading Co.	5,000	391,000
OCT. 31.—By the <i>Georgie</i> =Liverpool:		
Poel & Arnold	14,500	
OCT. 31.—By the <i>Minnehaha</i> =London:		
George A. Alden & Co.	9,000	
NOV. 1.—By the <i>Moltke</i> =Hamburg:		
Poel & Arnold	10,000	
NOV. 3.—By the <i>Cedric</i> =Liverpool:		
Wallace L. Gough	12,000	
Joseph Cantor	5,000	17,000
NOV. 7.—By the <i>Etruria</i> =Liverpool:		
George A. Alden & Co.	19,000	
Poel & Arnold	8,000	
A. T. Morse & Co.	1,000	
Robinson & Tallman	4,500	32,500
NOV. 7.—By the <i>Finland</i> =Antwerp:		
A. T. Morse & Co.	16,000	
Joseph Cantor	2,000	18,000
NOV. 7.—By the <i>Bovic</i> =Liverpool:		
George A. Alden & Co.	56,000	
NOV. 9.—By the <i>Rotterdam</i> =Rotterdam:		
Poel & Arnold	51,000	
NOV. 9.—By the <i>Oceanic</i> =Liverpool:		
Poel & Arnold	10,000	
NOV. 10.—By the <i>Phoenicia</i> =Hamburg:		
Poel & Arnold	27,000	
George A. Alden & Co.	9,000	36,000

## AFRICANS.—Continued.

NOV. 11.—By the <i>Pentinsular</i> =Lisbon:		
General Rubber Co.	67,000	
Poel & Arnold	45,000	
Rubber Trading Co.	40,000	152,000
NOV. 12.—By the <i>Lucania</i> =Liverpool:		
General Rubber Co.	25,000	
George A. Alden & Co.	22,500	
A. T. Morse & Co.	11,000	58,500
NOV. 14.—By the <i>Hamburg</i> =Hamburg:		
A. T. Morse & Co.	11,500	
Earle Brothers	4,500	16,000
NOV. 14.—By the <i>Menominee</i> =London:		
George A. Alden & Co.	9,000	
NOV. 15.—By the <i>Vaderland</i> =Antwerp:		
Winter & Smille	15,000	
Joseph Cantor	11,000	26,000
NOV. 17.—By the <i>Majestic</i> =Liverpool:		
Poel & Arnold	25,000	
George A. Alden & Co.	22,000	
Henry A. Gould Co.	7,000	
Wallace L. Gough	10,000	
A. T. Morse & Co.	7,000	71,000
NOV. 19.—By the <i>Pretoria</i> =Hamburg:		
George A. Alden & Co.	20,000	
A. T. Morse & Co.	20,000	40,000
NOV. 21.—By the <i>Umbria</i> =Liverpool:		
George A. Alden & Co.	27,000	
General Rubber Co.	11,000	
Poel & Arnold	15,000	53,000
NOV. 22.—By the <i>Cevic</i> =Liverpool:		
Poel & Arnold	156,000	
NOV. 22.—By the <i>Kroonland</i> =Antwerp:		
Poel & Arnold	45,000	
A. T. Morse & Co.	14,000	59,000
NOV. 23.—By the <i>Fricka</i> =Bordeaux:		
A. T. Morse & Co.	15,000	
EAST INDIAN.		
OCT. 27.—By the <i>Patricia</i> =Hamburg:		
Pierre T. Betts	14,600	
Poel & Arnold	4,000	18,600
NOV. 3.—By the <i>Lowther Castle</i> =Singapore:		
A. T. Morse & Co.	36,000	
George A. Alden & Co.	22,000	
Robert Brann & Co.	10,000	
D. A. Shaw & Co.	5,000	73,000
NOV. 7.—By the <i>Minneapolis</i> =London:		
Poel & Arnold	7,000	
Wallace L. Gough	2,000	
Rubber Trading Co.	2,500	11,500
NOV. 17.—By the <i>Athol</i> =Singapore:		
George A. Alden & Co.	11,000	
Croft & Co.	6,000	
Robert Brann & Co.	7,500	24,500
GUTTA-SIELUTONG		
NOV. 3.—By the <i>Lowther Castle</i> =Singapore:		
George A. Alden & Co.	535,000	
Hagemeyer & Brunn	100,000	635,000
NOV. 17.—By the <i>Athol</i> =Singapore:		
George A. Alden & Co.	235,000	
W. L. Wadleigh	20,000	
F. Bredt & Co.	20,000	285,000
GUTTA-PERCHA AND BALATA.		
OCT. 27.—By the <i>Patricia</i> =Hamburg:		
To Order	6,000	
NOV. 10.—By the <i>Phoenicia</i> =Hamburg:		
To Order	12,000	
NOV. 19.—By the <i>Pretoria</i> =Hamburg:		
To Order	6,000	
BALATA.		
OCT. 29.—By the <i>Philadelphia</i> =London:		
Earle Brothers	8,500	
NOV. 7.—By the <i>Minneapolis</i> =London:		
Earle Brothers	4,500	
NOV. 9.—By the <i>Menzanar</i> =Ciudad Bolivar:		
Havre and Hamburg, etc.	70,000	
NOV. 15.—By the <i>Carribbee</i> =Demerara:		
Charles P. Seidstone	1,000	
Otto Heinze & Co.	3,000	



Nov. 18.—By the <i>Granada</i> —Trinidad:			
Frane & Co.	5,000		
Rogers & Heinelein	500		
G. Amstutz & Co.	500	1,000	

## CUSTOM HOUSE STATISTICS.

## PORT OF NEW YORK—OCTOBER.

Imports:	POUNDS.	VALUE
India rubber	5,038,335	\$3,183,442
Gutta-percha	66,442	22,898
Gutta-jelutong (Pontianak)	839,945	40,043
Total	5,944,722	\$3,236,278
Exports:		
India rubber	30,552	\$29,386

## BOSTON ARRIVALS.

Oct. 5.—By the <i>Republic</i> —Liverpool:		
George A. Alden & Co.—African	5,611	
Oct. 8.—By the <i>Lancastrian</i> —London:		
George A. Alden & Co.—East Indian	3,979	
Oct. 10.—By the <i>Sironia</i> —Liverpool:		
George A. Alden & Co.—African	6,715	
Oct. 11.—By the <i>Minneapolis</i> —London:		
George A. Alden & Co.—African	97,333	

Oct. 12.—By the <i>Teutonic</i> —Rotterdam:		
George A. Alden & Co.—Samples	454	
Oct. 12.—By the <i>Devonian</i> —Liverpool:		
George A. Alden & Co.—African	2,956	
Oct. 20.—By the <i>Finland</i> —Antwerp:		
George A. Alden & Co.—African	125,002	
Oct. 22.—By the <i>Ivernia</i> —Liverpool:		
George A. Alden & Co.—Caucho	44,500	
George A. Alden & Co.—Centals	15,142	59,647
Oct. 25.—By the <i>Michigan</i> —Liverpool:		
Poel & Arnold—African	6,684	
Total	308,376	

[Value, \$235,618.]

## OCTOBER EXPORTS OF INDIA-RUBBER FROM PARA (KILOGRAMS).

EXPORTERS.	UNITED STATES.					EUROPE.					TOTAL
	FINE.	MEDIUM.	COARSE.	CAUCHO.	TOTAL.	FINE.	MEDIUM.	COARSE.	CAUCHO.	TOTAL.	
Cmak, Schrader & Co.	114,991	13,213	171,487	—	299,691	194,190	16,228	64,720	—	275,138	574,829
Da Costa & Co.	72,479	6,843	157,358	4,573	241,253	68,886	3,204	45,970	6,150	124,210	365,463
Adelbert H. Alden	104,320	33,130	86,360	2,560	226,370	83,350	8,170	17,570	762	109,852	336,222
R. Suarez & Co.	2,770	706	150	—	3,626	96,474	—	6,632	3,295	106,401	110,027
Neale & Staats	—	—	29,484	—	29,484	33,486	3,024	8,277	—	44,787	74,271
J. Marques & Co.	21,633	—	5,665	—	27,298	34,618	746	6,278	—	41,642	68,940
Pires, Teixeira & Co.	22,759	—	2,253	—	25,012	—	—	—	—	—	25,012
Kanthack & Co.	14,131	2,898	4,558	—	21,587	—	—	—	—	—	21,587
Denis Crouan & Co.	320	—	2,350	—	2,670	12,350	843	—	—	13,193	15,863
Singlehurst Brocklehurst & Co.	—	—	1,678	—	1,678	7,480	1,020	5,550	—	14,050	15,728
H. A. Astlett	—	—	1,587	—	1,587	—	—	—	—	—	1,587
Direct from Manaos	463,645	91,951	108,958	10,061	674,615	305,858	66,345	39,934	35,356	447,493	1,122,108
Direct from Iquitos	3,166	—	5,448	—	8,614	106,284	66,700	38,956	69,126	281,066	289,680
Total	820,214	148,741	577,336	17,194	1,563,485	942,976	166,280	233,887	114,680	1,457,832	3,021,317

## OFFICIAL STATISTICS OF CRUDE INDIA-RUBBER (POUNDS).

UNITED STATES.				GREAT BRITAIN.			
MONTHS.	IMPORTS.	EXPORTS.	NET IMPORTS.	MONTHS.	IMPORTS.	EXPORTS.	NET IMPORTS.
September, 1904	2,923,997	365,507	2,558,490	September, 1904	3,423,168	2,098,096	1,325,072
January-August	41,629,348	2,220,818	39,409,355	January-August	38,298,848	22,141,062	16,157,786
Nine months, 1904	44,553,345	2,586,325	41,967,845	Nine months, 1904	41,722,016	24,239,158	17,482,858
Nine months, 1903	42,848,398	2,583,197	40,315,201	Nine months, 1903	39,249,168	28,900,592	10,348,576
Nine months, 1902	37,610,560	2,537,333	35,073,236	Nine months, 1902	34,992,496	23,040,192	11,952,304

GERMANY.				ITALY.			
MONTHS.	IMPORTS.	EXPORTS.	NET IMPORTS.	MONTHS.	IMPORTS.	EXPORTS.	NET IMPORTS.
September, 1904	2,847,240	715,226	2,132,020	September, 1904	76,340	1,980	74,360
January-August	23,755,600	6,587,680	17,167,920	January-August	1,051,820	75,460	976,360
Nine months, 1904	26,602,840	7,302,900	19,299,940	Nine months, 1904	1,128,160	77,440	1,050,720
Nine months, 1903	25,848,020	8,873,040	16,974,980	Nine months, 1903	1,117,820	123,420	994,400
Nine months, 1902	24,828,100	16,200,960	14,627,140	Nine months, 1902	1,046,540	82,580	963,960

FRANCE.*				AUSTRIA-HUNGARY.			
MONTHS.	IMPORTS.	EXPORTS.	NET IMPORTS.	MONTHS.	IMPORTS.	EXPORTS.	NET IMPORTS.
September, 1904	1,926,540	1,207,580	718,960	September, 1904	164,340	1,100	163,240
January-August	13,976,820	7,431,160	6,545,660	January-August	1,931,600	15,186	1,916,420
Nine months, 1904	15,903,360	8,638,740	7,264,620	Nine months, 1904	2,095,940	16,280	2,079,660
Nine months, 1903	11,754,160	6,826,600	4,927,560	Nine months, 1903	2,137,080	20,460	2,116,620
Nine months, 1902	12,490,940	7,109,960	5,380,980	Nine months, 1902	1,997,380	11,220	1,986,160

BELGIUM.*							
MONTHS.	IMPORTS.	EXPORTS.	NET IMPORTS.				
June, 1904	1,034,701	922,387	112,314				
January-May	7,963,094	6,306,161	1,656,933				
Six months, 1904	8,997,795	7,228,548	1,769,247				
Six months, 1903	8,212,342	5,815,741	2,396,601				
Six months, 1902	7,683,867	5,551,059	2,132,808				

NOTE.—German statistics include Gutta-percha, Balata, old rubber, and substitutes. French, Austrian, and Italian figures include Gutta-percha. The exports from the United States embrace the supplies for Canadian consumption.

\* General Commerce.

† Special Commerce.

WILLIAM T. BAIRD, PRESIDENT

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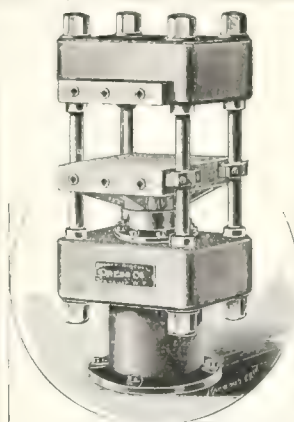
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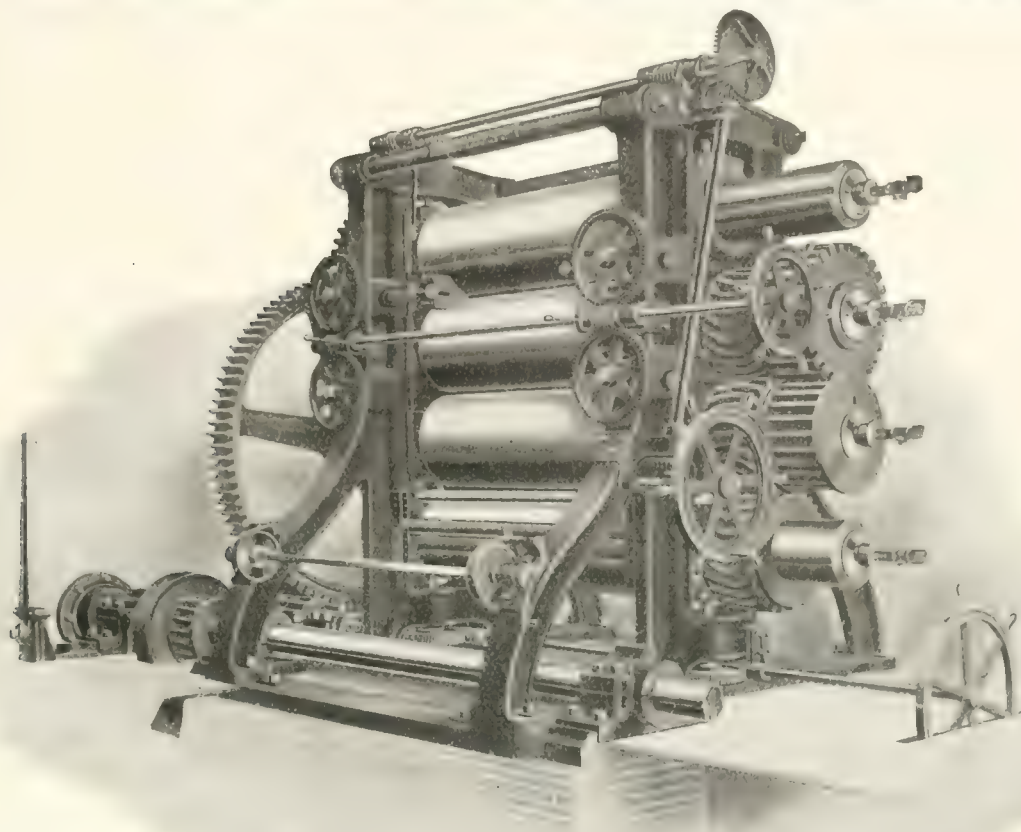
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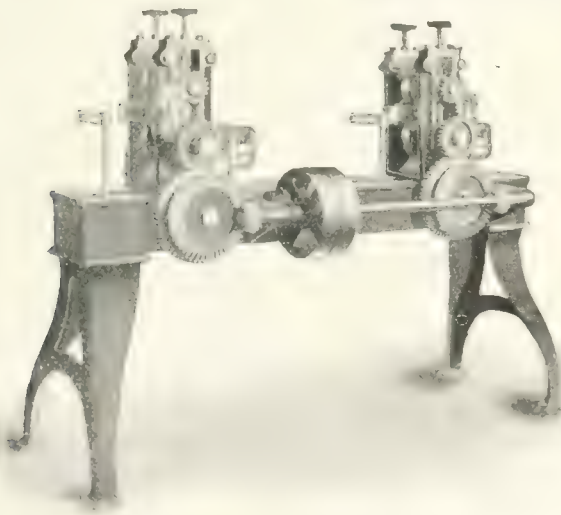
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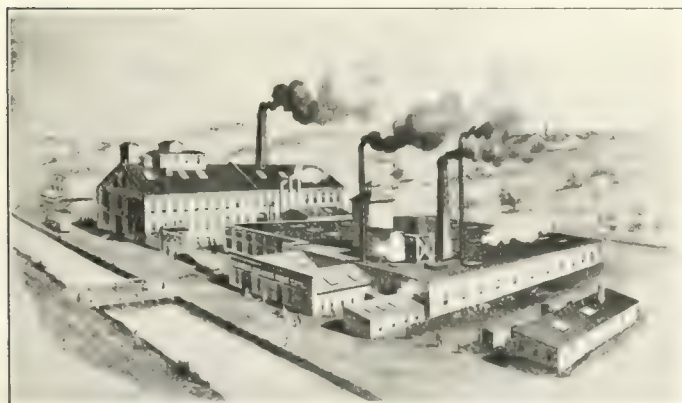
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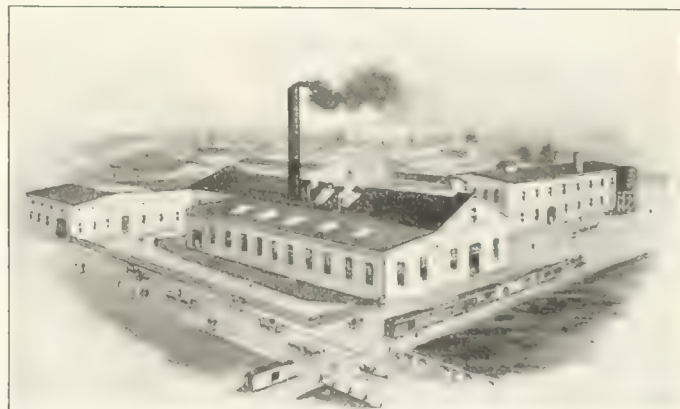
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WM. SOMERVILLE'S SONS, 3, Cooper's Row, Liverpool, England,  
Great Britain and the Continent of Europe.

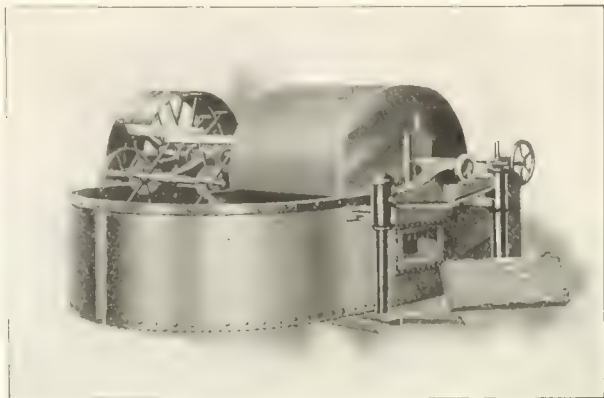
G. BRICE, 92, Rue de la Victoire, Paris, France,  
Seul Agent Dépositaire. France and Belgium.

*Mention The India Rubber World when you write.*



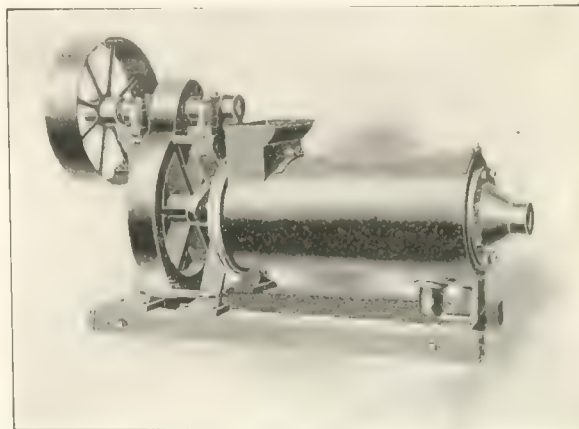
# NEW RUBBER MACHINERY

**WASHING MACHINE**  
for Crude Rubber



*Removes all Sand, Bark and Dirt. Try it for Centrals, Africans and Coarse Para. Rubber Planters; this will clean your Scrap Rubber.*

**WATER SEPARATOR**  
for Reclaimed Rubber



*Instead of Evaporating Tanks, use this. Takes 40% of the moisture out at once. Then a short time on the screens delivers the product bone dry.*

**THE TURNER VAUGHN & TAYLOR CO.**

Cuyahoga Falls, Ohio, U. S. A.

Write us

## Hydraulic Steam Presses



All sizes and styles.

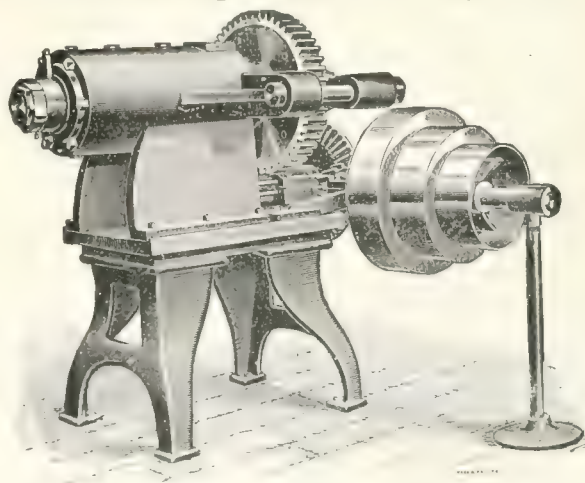
Molds of every description, nothing too small, nothing too large or complicated. Castings for iron work of every description. Let us figure with you.

**A. Adamson**  
Akron, O.

*Mention The India Rubber World when you write.*

## CLARK'S Reliable Tubing Machine

FOR THE MANUFACTURE OF RUBBER TUBING AND CORD,  
And also the Covering of Electrical and Telephone Cables.



MANUFACTURED IN 4 SIZES BY

**EDRED W. CLARK, MACHINIST,**

Rubber Moulds and Rubber Machinery, Screw and Hydraulic Presses a Specialty

No. 31 WELLS STREET, HARTFORD, CONN.

*Mention The India Rubber World when you write.*

ESTABLISHED 1848.

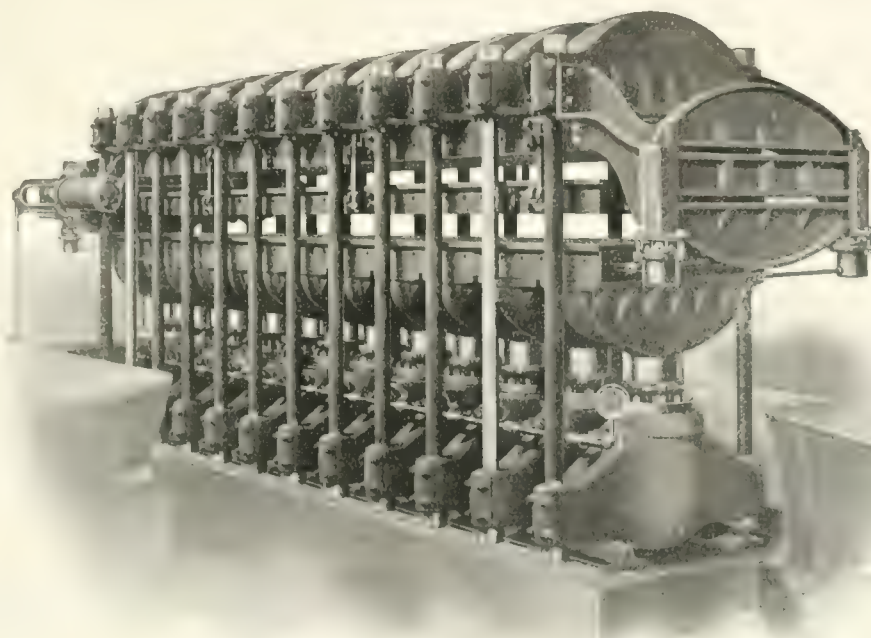
# Farrel Foundry and Machine Co.,

Largest Manufacturers in the World of \_\_\_\_\_

# Rubber Machinery.

FRANKLIN FARREL, PRES.  
CHARLES F. BLISS, TREAS.  
FRANK E. HOADLEY, SEC

ANSONIA, CONN., U. S. A.



STANDARD THREE-PLATEN BELT PRESS.  
BUILT WITH ANY SIZE AND NUMBER OF PLATENS

CALENDERS, GRINDERS, MIXERS, CRACKERS, WASHERS,  
WARMERS and REFINERS.

HYDRAULIC BELT PRESSES, with Hydraulic Stretchers,  
MULTIPLE, HEEL and SCREW PRESSES, PUMPS,  
ACCUMULATORS and FITTINGS.

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LINOLEUM MACHINERY—Calenders, Grinders, Mixers, etc.  
Cabling, Winding, Spooling and Measuring Machines for Insulated Wire.  
Chilled Iron and Sand Rolls of all sizes, Steel and Wrought Iron Rolls.  
Shafting, Machine Moulded Gearing, Friction Clutches, etc.



# HIDALGO

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A RUBBER AND COFFEE INVESTMENT  
PAYING SIX PER CENT. INTEREST  
ON INSTALLMENT AND CASH SHARES

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This Company is under the same management which has made  
*La Zacualpa Rubber Plantation* an acknowledged success.

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FOR PARTICULARS AND PRINTED MATTER ADDRESS  
HIDALGO PLANTATION AND COMMERCIAL COMPANY

713 MARKET STREET, SAN FRANCISCO, CALIFORNIA

*Mention The India Rubber World when you write.*

 We Manufacture Our Products by Mechanical Means. 

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## THE BLOOMINGDALE SOFT RUBBER WORKS,

Manufacturers of

THE FINEST GRADES OF

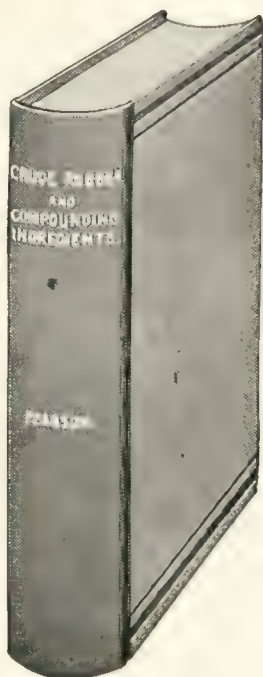
# Reclaimed and Devulcanized Rubber

FOR

## Manufacturing and Mechanical Purposes.

### BLOOMINGDALE, N. J.

*Mention The India Rubber World when you write.*



PRICE \$10.

PREPAID.

Letter from the Chemist  
of a Leading Rubber Works

TO THE AUTHOR OF

## "Crude Rubber and Compounding Ingredients."

MR. HENRY C. PEARSON, Editor THE INDIA RUBBER WORLD, New York.—*Dear Mr. Pearson:* In my capacity as Chemist for the——Rubber Manufacturing Co., I have occasion at different times to use your book "**Crude Rubber and Compounding Ingredients**," as a reference, and I find that the information it contains is taken from actual experience with large rubber manufacturers, which information is more valuable than it is possible to get in laboratory experiments. I keep your book at hand for such reference.

Very sincerely yours,

August 23, 1904

Chemist.

THE INDIA RUBBER PUBLISHING CO.,

No. 150 Nassau Street, . . . . New York.

# No?

IF it is necessary to have a thermometer, isn't it necessary to have a GOOD ONE? If it is necessary to have a good thermometer, isn't it necessary to have an "H. & M."?

If your answer is "no" to EITHER of these "Ifs," it will pay you to ask for Catalogue.

**Hohmann  
& Maurer Mfg. Co.**  
ROCHESTER, N. Y.

NEW YORK OFFICE: 85 Chambers St.  
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## LA FLORENCIA PLANTATION HAS EARNED DIVIDENDS FOR YEARS.

We are offering for sale plantation stock paying 7 per cent. semi-annual interest on cash and installment shares.

### INTEREST IS GUARANTEED

40 per cent. of our property is now under cultivation.

Write for literature and particulars to the

**Badger Mexican Plantation Company,**

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RACINE, WIS.

On July 1, 1904, a 9 per cent. dividend was declared and paid on all outstanding stock.

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# J. H. LANE & CO.,

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HOSE  
BELT  
SAIL  
WIDE

**DUCKS**

PAPER FELTS  
OUNCE GOODS  
ARMY DUCK  
OSNABURGS

**AUTOMOBILE  
AND BICYCLE**

**TIRE FABRICS**

SHEETINGS AND DRILLS.  
AND FABRICS IN REGULAR AND SPECIAL CONSTRUCTION.

SEA ISLAND, EGYPTIAN, AND PEELER YARNS,  
AND FABRICS IN REGULAR AND SPECIAL CONSTRUCTION.

*Mention The India Rubber World when you write.*

## Vacuum Drying Apparatus

FOR

Sheet and Reclaimed Rubber

EMIL PASSBURG SYSTEM

The Passburg (Patent) "VACUUM DRYING  
APPARATUS" is no experiment.

They are installed in all of the principal rubber  
manufactories of Europe.

200 chambers in daily operation drying rubber  
and rubber compounds.

Particulars upon application.

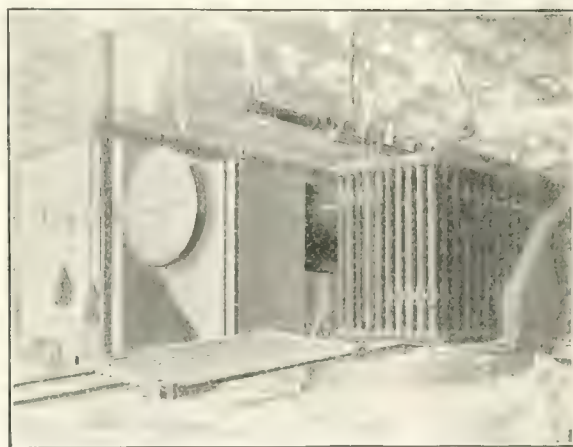
**JOSEPH P. DEVINE,**

314 Mooney-Brisbane Bldg.

BUFFALO, N. Y.

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## STURTEVANT ECONOMIZERS



For all boiler plants of 50 H. P. and over. Increase temperature of feed water 150 and 175. Save 10 to 20% in fuel. Increase boiler capacity 20 to 40%. Prolong life of boilers.

**B. F. STURTEVANT CO.,** Boston, Mass.  
General Office and Works, HYDE PARK, MASS.  
New York. Philadelphia. Chicago. London. 406

*Mention The India Rubber World when you write.*

## NEW JERSEY RUBBER COMPANY,

MANUFACTURERS OF ALL KINDS OF

## RECLAIMED \* RUBBER,

Auxiliary Plant for Trimmings, daily Capacity of 20,000 Pounds. Total daily Capacity 45,000 Pounds.

Office and Factories, LAMBERTVILLE, NEW JERSEY.

*Mention The India Rubber World when you write.*

## BONNER MANUFACTURING CO.,

MANUFACTURERS  
OF ALL GRADES

## RUBBER SUBSTITUTES.

GOODS MADE TO ORDER A SPECIALTY.

OFFICE: No. 89 State Street,

BOSTON, MASS.

*Mention The India Rubber World when you write.*

# Publishers' Page *INDIA RUBBER WORLD*

OFFICES:

No. 150 NASSAU ST., NEW YORK

## "Do Not Let Any Skip."

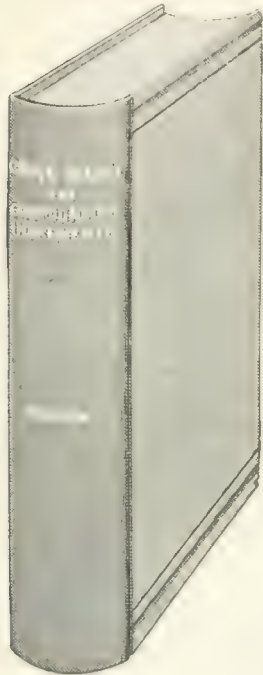
TO THE INDIA RUBBER WORLD—*Gentlemen*: I have deposited in the postoffice here, \$7, Mexican silver, to be paid to you in its value gold, in New York, in payment of bill enclosed. If it should be a little short, please let me know, and I will send the balance to you, but please do not let any numbers of THE WORLD skip, as I am always very interested in them. Very truly yours,

Escuintla, Mexico.

F. A. QUINBY.

## A Book of Suggestions.

THE element of suggestiveness is something that no live manufacturer should neglect. Busy men are apt to become so engrossed with the details of daily routine that they find time for little else. They feel that if they could only employ an alert, vigorous mind to suggest, and suggest, and suggest—good, bad, and indifferent, though the suggestions might be—some of them would be sure to be of value. Such help, however, is rare; indeed it is not in the market. The next best thing, therefore, is to put one's self in the way to do one's own suggesting. In "Crude Rubber and Compounding Ingredients" is found a record of the experiments, the successes, and failures of thousands of suggestions by the best rubber men of the world, and to read the book is to have them all, as it were, at one's elbow, saying: "Why don't you try this?" Or "My idea of the compound you want is thus and so." Or, "I use such an ingredient because it gives this result," and so on *ad infinitum*. It is well worth the price of the book to be able to summon such an array of experts from any part of the world at a moment's notice, and with no mileage costs or consultation fees.==Speaking of this



same book, a well known Rubber Superintendent recently said: "It has more meat in it than all of the other books and pamphlets combined. I use it constantly. It has been worth hundreds of dollars to me, it is so suggestive."

## A Rubber Man's Library.

THE record formed by the set of fifteen bound volumes comprising the issues of this Journal since 1889 is unquestionably the fullest and most complete history of the India-rubber and allied trades, not only within the period named, but in the past, since many articles have been published in relation to the beginnings of the rubber interest. This set of volumes, therefore, is essentially a rubber man's library of the highest value.

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TO THE INDIA RUBBER WORLD—*Gentlemen*: Please discontinue our ad in your "Want" columns, as we have had a great many replies and have now procured a suitable party. Very truly yours,

[A Tire Manufacturing Company.]

August 16, 1904.

BER WORLD. On looking through some of them, and seeing the number of articles in relation to rubber culture, and noting their character, he at once purchased those for the past two years, as likely to be of great help to him. In answer to frequent inquiries for printed matter on rubber planting, we are obliged to say that we know of no other books containing so much information on the subject as these same bound volumes.

## Back Numbers Wanted.

THE Publishers are desirous of obtaining a few copies in good condition of THE INDIA RUBBER WORLD for May and October 1903 and January 1904. Twenty-five cents per copy will be paid, either in cash or extending the account of subscribers.

## A Convenience for Business Men.

THE United States postoffice department announces that hereafter persons or firms desiring to mail large numbers of circulars or catalogues at one time will be allowed to do so without stamps being attached to the same, by prepayment of postage in money at the postoffice. In order to exercise this privilege a permit must first be obtained by the person or firm, whose name will thereafter be kept on record at the postoffice, and each mailing must contain at least 2000 identical pieces. Persons availing themselves of this privilege must have envelopes prepared with a card printed on the same, in the place usually occupied by the postage stamp, indicating that postage has been "Paid in Money." It is expected that this new regulation will prove a great convenience to houses mailing large quantities of printed matter, and it is merely an extension of a privilege which long has been enjoyed by publishers of newspapers and periodicals.

## SPECIAL NOTICES.

GENTLEMAN 28 years of age, seven years with well known firm of English manufacturers, thorough knowledge of the trade, good connections all over the United Kingdom, wishes to represent good American firm of manufacturers in England. Address A. F. M., care of THE INDIA RUBBER WORLD. [685]

WANTED.—A Superintendent of wide experience, and educated on broad lines, by a large India-rubber manufactory near New York. Must be a good handler of help and know their capacities for the various work and their scheduled wages; up in factory systems and cost of production; thoroughly understanding rubber machinery. A practical compounder of everything in the lines of Tires, solid and pneumatic, Druggists' Sundries, Battery Jars and Hard Rubber. Preference given to graduate chemist who understands the theories of chemistry as applied to rubber, and the modern methods of economical production and intimately acquainted with raw rubbers, their treatment, values and shrinkage. Address, with references, which must be the best, J. H. G., 110 West 39th street, New York City. [686]

## WANTED.

PROCESS wanted by a manufacturer, for vulcanizing rubber to leather for Horse Shoe Pads, and thereby rendering stitching unnecessary; will pay reasonable price for same. Address at once, PADS, care of THE INDIA RUBBER WORLD. [684]

## Insulation Formulas Obtained by Advertising.

TO THE INDIA RUBBER WORLD—*Gentlemen*: I am pleased to inform you that the advertisement in your paper met with the best results, as I received answers from all parts of the United States and Canada. Yours truly,

[From an Insulated Wire Works.]

August 3, 1904.



# Small Advertisement Department.

## SITUATIONS WANTED.

**MANAGER or SUPERINTENDENT.**—Position wanted as Manager or Superintendent of a Rubber Goods factory, or in similar capacities with best factories. Especially competent in Mechanical Sundries, Vehicle Parts and Machinery. Experienced in manufacturing and selling goods. Have all necessary compounds and know how to manipulate them. Address C. A. N. [674]

**YOUNG MAN** familiar with the manufacture of Mechanical and Druggists' Rubber Goods, having a knowledge of the compounding and costs; also compounds for these goods, will accept position with large manufacturing or wholesale concern. Address K. C. [675]

**CALENDER MAN.** Position wanted, taking charge of Calender Room, by a man having 10 years' experience in the Druggists' Sundries line. Address C. H. B., care of "The India Rubber World." [676]

**CHEMIST.**—A graduate of Cornell University (chemical course), now employed professionally in chemical work, is desirous of making a connection with a rubber factory, where his general knowledge may be of some use, and where an opportunity will be afforded him to gain a practical knowledge of the rubber manufacture. Address CHEMIST, care of THE INDIA RUBBER WORLD. [679]

**POSITION** wanted to represent Mechanical Rubber Goods factory; thoroughly experienced in Mechanical line; have travelled in the Middle West for the past five years. Address E. R. M., care of THE INDIA RUBBER WORLD. [648]

## SITUATIONS OPEN.

**WANTED.**—A man thoroughly familiar with the making of all kinds of Druggists' Sundries, Gloves, etc. Address GOOD FUTURE, care of THE INDIA RUBBER WORLD. [671]

**SALESMAN** wanted for a complete line of Mechanical Rubber Goods, and Cotton Fire Hose, in New England states. Must have established trade and first class references. State length of experience, kind of goods sold, and salary required. Address N. S., care of THE INDIA RUBBER WORLD. [672]

**WANTED,** in the office of an up-to-date rubber mill, one who is acquainted with Mechanical Rubber Goods, is a good correspondent, and who has some executive ability. In answering, give age, experience, and amount of salary required. Address C. O., care of THE INDIA RUBBER WORLD. [673]

**SUPERINTENDENT.**—Wanted by an up-to-date and thoroughly equipped factory, a thoroughly competent Superintendent; one who has had large experience in the manufacture of Belting, Hose of all kinds, Packings, Molded Goods; and one whose experience has been in first-class mills; must be up-to-date in modern factory methods. Any reasonable salary will be paid, and good opportunity for the future for the right man. Please give history of experience. Address P. O. Box 940, Chicago, Ill. [679]

**FOREMAN** wanted for Hose Room. One who thoroughly understands the making of Hose and the handling of men. Address H. F., care of THE INDIA RUBBER WORLD. [681]

## SITUATIONS OPEN IN EUROPE.

A LARGE European Rubber Company is open to engage the services of a Practical Superintendent for their Mechanical Department. Must have a thorough knowledge of the manufacture in all its branches of Belting, Hose, Sheet Rubber, Valves, and also have a knowledge of Machinery of every description. Liberal remuneration. Write with full particulars of previous experience, salary required, and all particulars to C. V., care of THE INDIA RUBBER WORLD. All communications will be treated confidentially. [678]

**SHOES.**—A large European Rubber Company is open to engage the services of a Practical Superintendent for their Shoe Department. Must have a thorough knowledge of the manufacture in all its branches of Overshoes, Boots, and Canvas Shoes of every description. Liberal remuneration. Write with full particulars of previous experience, salary required, and all particulars to FOOTWEAR, care of THE INDIA RUBBER WORLD. All communications will be treated confidentially. [677]

## FOR SALE.

**COMPLETE Rubber Plant,** with or without buildings, up to date machinery, with engines and boilers, in first class order, for the manufacture of Soft and Hard Rubber Goods, for sale at a reasonable figure, either complete or in part. Apply to THOMAS F. STEVENSON, No. 120 Liberty street, New York city, or RINDS-KOPF BROS., Nos. 397-399 Sumner avenue, Brooklyn, N. Y. [683]

**ALL KINDS RUBBER WASTE.**—We sell at low price, pure unvulcanized Rubber Scrap from Cement Waste. Write for free sample. Best cash prices paid for rubber scrap and waste. Old Wringer Rolls bought and sold a specialty. UNITED STATES WASTE RUBBER Co., No. 487 N. Warren avenue, Brockton, Mass.

**FOR SALE.**—First-class Cement Churns or Mixers at half value. Address JOSEPH WHITNEY, 48 North Front St., Philadelphia, Pa. [680]

## WANTED.

**MOLDS.**—Pneumatic Single Tube Tire Molds to be used in press, Auto Molds, 28" x 2 1/2" or 28" x 3" preferred. T. J. COOPER, 58 River street, Paterson, N. J. [682]

## EUROPEAN AGENCY WANTED.

**AGENT** firm very well introduced by all dealers in Austria-Hungary, first class references, is seeking representations for Sundries and Surgical Rubber Goods. Address M., care of "Gummi-Asbest Zeitung," Kasernengasse 9, Wien, VI/I. Austria. [670]

## SECOND HAND MACHINERY.

**IF** it's about second hand Rubber Machinery, write us; if about Scrap Iron, write our competitors, as we do not buy Machinery that is unfit for use. A point to those who want to buy: "We handle all kinds" W. C. COLEMAN CO., Setauket (Long Island), New York.

## Chinese Coolies for Rubber Plantations.

**WE** can furnish by January 1, 1905, strong, healthy and carefully selected Coolies, imported direct from China with permission of the Imperial Government, for service on Rubber Plantations. No interruption of work through fiestas. Planters interested can obtain full information by addressing EASTMAN G. CURREY, General Manager, The Eastern Transportation Company, Nashville, Tenn.

## Rubber Mill Machinery For Sale.

**MOST** of the machinery that I have on hand is from the different factories which I have dismantled, such as the George Watkinson & Co. Philadelphia; International Rubber Co., Jersey City; the old Boston Rubber Co.'s plant, Chelsea, Mass.; International A. & V. Tire Co.'s plant, Newton Upper Falls; also part of the machinery at Milltown, N. J., and of the Reclaiming plant, Malden, Mass., and the New Brunswick Rubber Co., which I bought from the India Rubber Co., at the plant in New Brunswick, N. J.

All this stock includes large Engines, Boilers, Pumps, Hydraulic Pumps, Accumulators and weights, Presses of all sizes, Hydraulic Presses, Mills, Grinders, Crackers, Washers, Calenders, Devulcanizers, Shafting, Piping, Tire Molds, long solid vehicle tire molds (all sizes of cavities); also pneumatic Molds and steam molds.

In fact I have all kinds of rubber machinery that was used in some of the largest factories in the country. All of the machinery mentioned is in the best possible condition and almost as good as new. It was taken from factories that went out of business and was not removed because it was thought to be worn out.

I bought this machinery practically at scrap iron prices, and will sell it at a little above scrap iron prices. This machinery lies in my storehouse and yard in Trenton.——Also: About 30 tons of Shafting, Pulleys and Hangers, all sizes, good as new.

PHILIP McGRORY, Trenton, New Jersey.

**HERBERT S. KIMBALL,**  
**MILL ARCHITECT and ENGINEER,**  
**RUBBER FACTORY ENGINEERING.**

101 TREMONT STREET.

BOSTON, MASS.

**LASTS** FOR RUBBER SHOES **LAST**  
**MIDDLESEX LAST CO., Boston, Mass., U. S. A.** **DESIGNING**  
**A**  
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# Publishers' Page *INDIA RUBBER WORLD*

OFFICES:  
No. 150 NASSAU ST., NEW YORK

## "Do Not Let Any Skip."

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[A Tire Manufacturing Company.]

August 16, 1904.

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[From an Insulation Worker.]

August 3, 1904.



# Small Advertisement Department.

## SITUATIONS WANTED.

**MANAGER or SUPERINTENDENT.**—Position wanted as Manager or Superintendent of a Rubber Plantation, or a Rubber Goods factory, with best factories. Especially competent in Mechanical Sundries, Vehicle Tires, and Molded Goods, on both manufacturing and selling ends. Have all necessary compounds and know how to manipulate them. Address C. A. N., care of THE INDIA RUBBER WORLD. [674]

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## SITUATIONS OPEN.

**WANTED.**—A man thoroughly familiar with the making of all kinds of Druggists' Sundries, Gloves, etc. Address GOOD FUTURE, care of THE INDIA RUBBER WORLD. [671]

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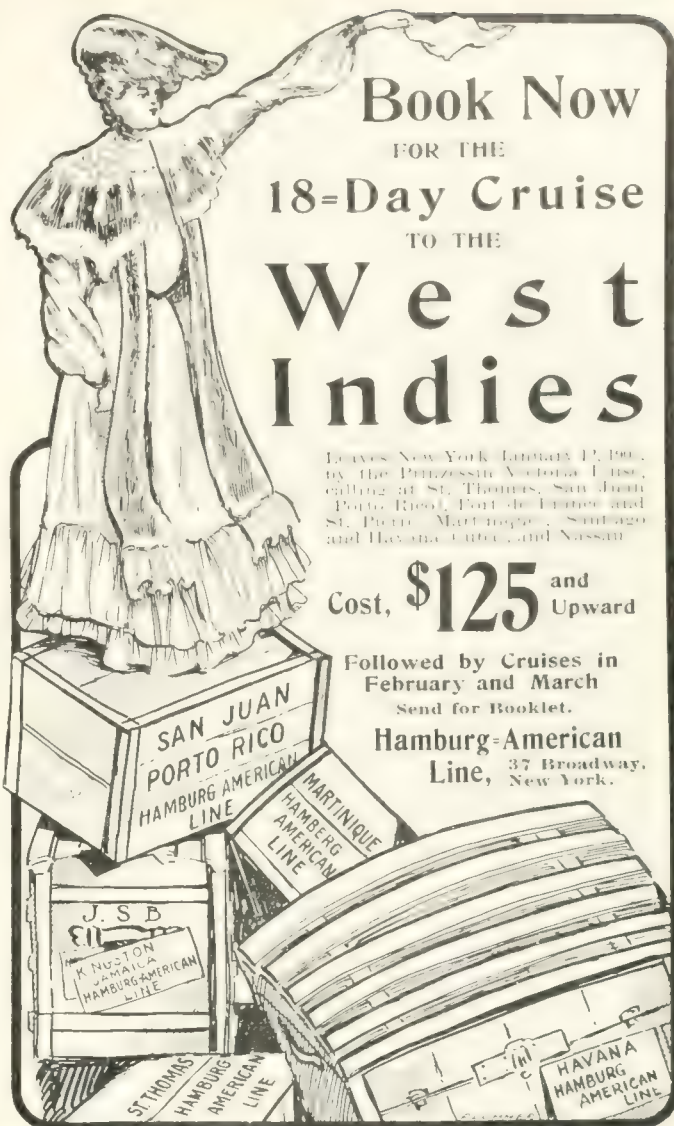
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Cleveland Rubber Co., Cleveland, O.  
Empire Rubber Mfg. Co., Trenton, N. J.  
Eureka Fire Hose Co., New York.  
Eureka Rubber Mfg. Co. of Trenton.  
B. F. Goodrich Co., Akron, O.  
Gutta Percha & Rubber Mfg. Co., N. Y.  
Gutta Percha and Rubber Mfg. Co. of Toronto.  
Home Rubber Co., Trenton, N. J.  
Manhattan Rubber Mfg. Co., New York.  
N. J. Car Spring & Rubber Co., Jersey City, N. J.  
New York Belting & Packing Co., N. Y.  
Peerless Rubber Mfg. Co., New York.  
Republic Rubber Co., Youngstown, O.  
Revere Rubber Co., Boston.  
Jos. Stokes Rubber Co., Trenton, N. J.  
Voorhees Rubber Mfg. Co., Jersey City.  
Whitman & Barnes Mfg. Co., Akron, O.

## Hose—Submarine.

Boston Belting Co., Boston-New York.  
B. F. Goodrich Co., Akron, O.  
Republic Rubber Co., Youngstown, O.

## Hose—Wire Wound.

Boston Belting Co., Boston-New York.  
Boston Woven Hose & Rubber Co.  
Canadian Rubber Co. of Montreal.  
B. F. Goodrich Co., Akron, O.  
N. J. Car Spring & Rubber Co., Jersey City.  
Peerless Rubber Mfg. Co., New York.  
Republic Rubber Co., Youngstown, O.  
Revere Rubber Co., Boston.

## "Jenkins '96" Packing.

Jenkins Bros., New York.

## Lawn Sprinklers.

Boston Woven Hose & Rubber Co.  
Canadian Rubber Co. of Montreal.

## Mallets (Rubber).

Boston Belting Co., Boston-New York.  
B. F. Goodrich Co., Akron, O.  
Peerless Rubber Mfg. Co., New York.  
Revere Rubber Co., Boston-New York.

## Mould Work.

## [See Mechanical Rubber Goods.]

Davidson Rubber Co., Boston.  
Davol Rubber Co., Providence, R. I.  
Faultless Rubber Co., Akron, O.  
Hardman Rubber Co., Belleville, N. J.  
Hodgman Rubber Co., New York.  
La Crosse (Wis.) Rubber Mills Co.  
Mattson Rubber Co., New York.  
National India Rubber Co., Bristol, R. I.  
Plymouth Rubber Co., Stoughton, Mass.  
Tyer Rubber Co., Andover, Mass.

## "Nubian" Packing.

Voorhees Rubber Mfg. Co., Jersey City  
Oil Well Supplies.

Boston Belting Co., Boston-New York.  
Boston Woven Hose & Rubber Co.  
B. F. Goodrich Co., Akron, O.  
Lake Shore Rubber Co., Erie, Pa.  
N. J. Car Spring & Rubber Co., Jersey City.  
Peerless Rubber Mfg. Co., New York.  
Republic Rubber Co., Youngstown, O.  
Revere Rubber Co., Boston-Pittsburgh.  
Voorhees Rubber Mfg. Co., Jersey City.  
Whitman & Barnes Mfg. Co., Akron, O.

## Paper Machine Rollers.

Boston Belting Co., Boston-New York  
B. F. Goodrich Co., Akron, O.  
Republic Rubber Co., Youngstown, O.  
Revere Rubber Co., Boston-New York.  
Peerless Rubber Mfg. Co., New York.  
Voorhees Rubber Mfg. Co., Jersey City.

## "Perfection" Belting.

Boston Woven Hose & Rubber Co.

## Plumbers' Supplies.

Canadian Rubber Co. of Montreal.  
B. F. Goodrich Co., Akron, O.  
Republic Rubber Co., Youngstown, O.

## Pump Buckets.

B. F. Goodrich Co., Akron, O.  
Peerless Rubber Mfg. Co., New York.  
Republic Rubber Co., Youngstown, O.

## Pump Valves.

See Mechanical Rubber Goods.  
Jenkins Bros., New York.

## MECHANICAL GOODS.

## "Rainbow" Packing.

Peerless Rubber Mfg. Co., New York.

## Reels—Hose.

Boston Belting Co., Boston-New York.  
Boston Woven Hose & Rubber Co.  
Peerless Rubber Mfg. Co., New York.  
Republic Rubber Co., Youngstown, O.

## Rings.

Boston Belting Co., Boston-New York.  
B. F. Goodrich Co., Akron, O.  
Peerless Rubber Mfg. Co., New York.  
Plymouth Rubber Co., Stoughton, Mass.  
Republic Rubber Co., Youngstown, O.

## Rollers—Rubber Covered.

Boston Belting Co., Boston.  
Canadian Rubber Co. of Montreal.  
Cleveland Rubber Co., Cleveland, O.  
Empire Rubber Mfg. Co., Trenton, N. J.  
Eureka Rubber Mfg. Co. of Trenton.  
B. F. Goodrich Co., Akron, O.  
Home Rubber Co., Trenton, N. J.  
Manhattan Rubber Mfg. Co., New York.  
Mechanical Rubber Co., Chicago.  
N. J. Car Spring & Rubber Co., Jersey City, N. J.  
New York Belting & Packing Co., N. Y.  
Peerless Rubber Mfg. Co., New York.  
Plymouth Rubber Co., Stoughton, Mass.  
Republic Rubber Co., Youngstown, O.  
Revere Rubber Co., Boston-New York.

## Sewing Machine Rubbers.

B. F. Goodrich Co., Akron, O.

## Springs—Rubber.

Boston Belting Co., Boston-New York.  
Canadian Rubber Co. of Montreal.  
B. F. Goodrich Co., Akron, O.  
Hardman Rubber Co., Belleville, N. J.  
Liverpool Rubber Co., Liverpool, Eng.  
N. J. Car Spring & Rubber Co., Jersey City.  
Peerless Rubber Mfg. Co., New York.  
Plymouth Rubber Co., Stoughton, Mass.  
Republic Rubber Co., Youngstown, Ohio.  
Revere Rubber Co., Boston-New York.  
Voorhees Rubber Mfg. Co., Jersey City.

## Stair Treads.

Boston Belting Co., Boston-New York.  
Boston Woven Hose & Rubber Co.  
Canadian Rubber Co. of Montreal.  
Cleveland Rubber Co., Cleveland, O.  
Empire Rubber Mfg. Co., Trenton, N. J.  
Home Rubber Co., Trenton, N. J.  
Liverpool Rubber Co., Liverpool, Eng.  
Manhattan Rubber Mfg. Co., New York.  
N. J. Car Spring & Rubber Co., Jersey City, N. J.  
New York Belting & Packing Co., N. Y.  
New York Rubber Co., New York.  
Peerless Rubber Mfg. Co., New York.  
Republic Rubber Co., Youngstown, O.  
Revere Rubber Co., Boston-New York.  
Voorhees Rubber Mfg. Co., Jersey City.

## Thread.

Mechanical Fabric Co., Providence, R. I.  
Revere Rubber Co., Boston.

## Tiling.

Canadian Rubber Co. of Montreal.  
B. F. Goodrich Co., Akron, O.  
Gutta Percha & Rubber Mfg. Co., N. Y.  
N. J. Car Spring & Rubber Co., Jersey City.  
New York Belting & Packing Co., N. Y.  
Peerless Rubber Mfg. Co., New York.  
Republic Rubber Co., Youngstown, Ohio.  
Voorhees Rubber Mfg. Co., Jersey City.

## Tires.

AUTOMOBILE, BICYCLE, AND CARRIAGE.  
Canadian Rubber Co. of Montreal.  
Continental Caoutchouc & Guttapercha Co., Hanover.  
Empire Rubber Mfg. Co., Trenton, N. J.  
B. F. Goodrich Co., Akron, O.  
Gutta Percha & Rubber Mfg. Co., Toronto.  
Kokomo Rubber Co., Kokomo, Ind.  
Lake Shore Rubber Co., Erie, Pa.  
Liverpool Rubber Co., Liverpool, Eng.  
North British Rubber Co., Ltd., Edinburgh.  
Plymouth Rubber Co., Stoughton, Mass.  
Republic Rubber Co., Youngstown, O.

## AUTOMOBILE AND CARRIAGE.

Boston Belting Co., Boston-New York.  
Revere Rubber Co., Boston-New York.  
Eureka Rubber Mfg. Co., Trenton, N. J.

## MECHANICAL GOODS.

## Truck Bands.

Boston Belting Co., Boston.  
Cleveland Rubber Co., Cleveland, O.  
Empire Rubber Mfg. Co., Trenton, N. J.  
B. F. Goodrich Co., Akron, O.  
Home Rubber Co., Trenton, N. J.  
Manhattan Rubber Mfg. Co., New York.  
Mechanical Rubber Co., Chicago.  
N. J. Car Spring & Rubber Co., Jersey City, N. J.  
New York Belting & Packing Co., N. Y.  
Peerless Rubber Mfg. Co., New York.  
Republic Rubber Co., Youngstown, O.  
Voorhees Rubber Mfg. Co., Jersey City.  
Whitman & Barnes Mfg. Co., Akron, O.

## Tubing.

## [See Mechanical Rubber Goods.]

American Hard Rubber Co., New York.  
Davidson Rubber Co., Boston.  
Davol Rubber Co., Providence, R. I.  
Hardman Rubber Co., Belleville, N. J.  
Plymouth Rubber Co., Stoughton, Mass.  
Tyer Rubber Co., Andover, Mass.

## Tubing (Beer).

Boston Belting Co., Boston-New York.  
Boston Woven Hose & Rubber Co.  
Canadian Rubber Co. of Montreal.  
Faultless Rubber Co., Akron, Ohio.  
B. F. Goodrich Co., Akron, O.  
Peerless Rubber Mfg. Co., New York.  
Plymouth Rubber Co., Stoughton, Mass.  
Republic Rubber Co., Youngstown, O.  
Voorhees Rubber Mfg. Co., Jersey City.

## "Usudurian" Packing.

Revere Rubber Co., Boston-New York.

## Valve Balls.

Boston Belting Co., Boston.  
Cleveland Rubber Co., Cleveland, O.  
Manhattan Rubber Mfg. Co., New York.  
Mechanical Rubber Co., Chicago.  
New York Belting & Packing Co., N. Y.  
New York Rubber Co., New York.  
Peerless Rubber Mfg. Co., New York.  
Republic Rubber Co., Youngstown, O.  
Whitman & Barnes Mfg. Co., Akron, O.

## Valve Discs.

American Hard Rubber Co., New York.  
Boston Belting Co., Boston-New York.  
B. F. Goodrich Co., Akron, O.  
Peerless Rubber Mfg. Co., New York.  
Republic Rubber Co., Youngstown, O.  
Revere Rubber Co., Boston-New York.

## Valves.

## [See Mechanical Rubber Goods.]

Jenkins Bros., New York-Chicago.  
Plymouth Rubber Co., Stoughton, Mass.

## Wringer Rolls.

Canadian Rubber Co. of Montreal.  
Cleveland Rubber Co., Cleveland, O.  
B. F. Goodrich Co., Akron, O.  
Republic Rubber Co., Youngstown, O.

## DRUGGISTS' AND STATIONERS' SUNDRIES

## Atomizers.

## Bandages.

## Bulbs.

## Syringes.

## Water Bottles.

## Druggists' Sundries—General.

American Hard Rubber Co., New York.  
C. J. Bailey & Co., Boston.  
Geo. Borgfeldt & Co., New York.  
Canadian Rubber Co. of Montreal.  
Cleveland Rubber Co., Cleveland, O.  
Davidson Rubber Co., Boston.  
Davol Rubber Co., Providence, R. I.  
Faultless Rubber Co., Akron, O.  
B. F. Goodrich Co., Akron, O.  
Hanover Rubber Co., Hanover, Germany.  
Hardman Rubber Co., Belleville, N. J.  
Hodgman Rubber Co., New York.  
North British Rubber Co., Ltd., Edinburgh.  
Tyer Rubber Co., Andover, Mass.

## Balls, Dolls and Toys.

Canadian Rubber Co. of Montreal.  
Continental Caoutchouc & Guttapercha Co.  
New York Rubber Co., New York.  
Whitman & Barnes Mfg. Co., Akron, O.



## RUBBER BUYERS' DIRECTORY—CONTINUED.

## DRUGGISTS' SUNDRIES

## Combs.

American Hard Rubber Co., New York  
Geo. Borgfeldt & Co., New York.  
Hanover Rubber Co., Hanover, Germany.

## Elastic Bands.

Canadian Rubber Co. of Montreal.  
Davidson Rubber Co., Boston.  
Davol Rubber Co., Providence, R. I.  
B. F. Goodrich Co., Akron, O.  
Hodgman Rubber Co., New York-Boston  
Tyer Rubber Co., Andover, Mass.  
Whitman & Barnes Mfg. Co., Akron, O.

## Erasive Rubbers.

Davidson Rubber Co., Boston.  
B. F. Goodrich Co., Akron, O.  
Hardman Rubber Co., Belleville, N. J.  
Mattson Rubber Co., New York.

## Finger Cots.

Faultless Rubber Mfg. Co., Akron, O.  
B. F. Goodrich Co., Akron, O.  
Pure Gum Specialty Co., Barberton, O.

## Gloves.

Canadian Rubber Co. of Montreal.  
Davol Rubber Co., Providence, R. I.  
Faultless Rubber Co., Akron, O.  
B. F. Goodrich Co., Akron, O.  
Pure Gum Specialty Co., Barberton, O.

## Hard Rubber Goods.

American Hard Rubber Co., New York.  
Geo. Borgfeldt & Co., New York.  
Canadian Rubber Co. of Montreal.  
Davol Rubber Co., Providence, R. I.  
Hanover Rubber Co., Hanover, Germany.  
Hardman Rubber Co., Belleville, N. J.  
Stokes Rubber Co., Joseph, Trenton, N. J.  
Tyer Rubber Co., Andover, Mass.

## Hospital Sheatings.

Cleveland Rubber Co., Cleveland, O.  
Davidson Rubber Co., Boston.  
Davol Rubber Co., Providence, R. I.  
Hodgman Rubber Co., New York.  
Plymouth Rubber Co., Stoughton, Mass.  
Tyer Rubber Co., Andover, Mass.

## Hot Water Bottles.

[See Water Bottles.]

## Ice Bags.

Faultless Rubber Co., Akron, Ohio.  
B. F. Goodrich Co., Akron, O.  
Hodgman Rubber Co., New York.  
Pure Gum Specialty Co., Barberton, O.

## Ice Caps.

Faultless Rubber Co., Akron, Ohio.  
B. F. Goodrich Co., Akron, O.  
Hardman Rubber Co., Belleville, N. J.  
Pure Gum Specialty Co., Barberton, O.  
Tyer Rubber Co., Andover, Mass.

## Life Preservers.

Hodgman Rubber Co., New York.

## Mittens.

Davol Rubber Co., Providence, R. I.  
Faultless Rubber Co., Akron, O.

## Nipples.

Canadian Rubber Co. of Montreal.  
Cleveland Rubber Co., Cleveland, O.  
Davidson Rubber Co., Boston.  
Davol Rubber Co., Providence, R. I.  
Faultless Rubber Co., Akron, O.  
B. F. Goodrich Co., Akron, O.  
Pure Gum Specialty Co., Barberton, O.  
Tyer Rubber Co., Andover, Mass.

## Notions.

American Hard Rubber Co., New York.  
Davidson Rubber Co., Boston.  
Tyer Rubber Co., Andover, Mass.

## Sponges (Rubber).

Faultless Rubber Co., Ashland, Ohio.  
B. F. Goodrich Co., Akron, O.

## Stationers' Sundries.

American Hard Rubber Co., New York.  
Geo. Borgfeldt & Co., New York.  
Canadian Rubber Co. of Montreal.  
Cleveland Rubber Co., Cleveland, O.  
Davidson Rubber Co., Boston.  
Davol Rubber Co., Providence, R. I.  
B. F. Goodrich Co., Akron, O.  
Hanover Rubber Co., Hanover, Germany.  
Hardman Rubber Co., Belleville, N. J.  
Hodgman Rubber Co., New York-Boston.  
Tyer Rubber Co., Andover, Mass.

## DRUGGISTS' SUNDRIES.

## Stopples (Rubber).

Cleveland Rubber Co., Cleveland, O.  
Davol Rubber Co., Providence, R. I.  
Hodgman Rubber Co., New York.  
Manhattan Rubber Mfg. Co., New York.  
New York Belting & Packing Co., N. Y.  
Tyer Rubber Co., Andover, Mass.  
Whitman & Barnes Mfg. Co., Akron, O.

## Surgical Appliances.

Faultless Rubber Co., Akron, O.

## Throat Bags.

Cleveland Rubber Co., Cleveland, O.  
Davol Rubber Co., Providence, R. I.  
B. F. Goodrich Co., Akron, O.  
Tyer Rubber Co., Andover, Mass.

## Tobacco Pouches.

Canadian Rubber Co. of Montreal.  
Faultless Rubber Co., Akron, Ohio.  
B. F. Goodrich Co., Akron, O.  
Pure Gum Specialty Co., Barberton, O.  
Tyer Rubber Co., Andover, Mass.

## Toys.

Geo. Borgfeldt & Co., New York.  
B. F. Goodrich Co., Akron, O.  
Hanover Rubber Co., Hanover, Germany.

MACKINTOSHED  
AND SURFACE  
GOODS

## Air Goods (Rubber).

Canadian Rubber Co. of Montreal.  
Cleveland Rubber Co., Cleveland, O.  
Davol Rubber Co., Providence, R. I.  
B. F. Goodrich Co., Akron, O.  
Hodgman Rubber Co., New York.  
New York Rubber Co., New York.  
National India Rubber Co., Providence.  
Tyer Rubber Co., Andover, Mass.

## Air Mattresses.

Canadian Rubber Co. of Montreal.  
Mechanical Fabric Co., Providence, R. I.

## Aprons.

Hodgman Rubber Co., New York.

## Barbers' Bibs.

Davol Rubber Co., Providence, R. I.  
Tyer Rubber Co., Andover, Mass.

## Bathing Caps.

Davol Rubber Co., Providence, R. I.  
B. F. Goodrich Co., Akron, O.

## Bellows Cloths.

Boston Rubber Co., Boston.  
Cleveland Rubber Co., Cleveland, O.  
Hodgman Rubber Co., New York.  
La Crosse (Wis.) Rubber Mills Co.

## Calendering.

La Crosse (Wis.) Rubber Mills Co.  
Milford Rubber Co., Boston.  
Plymouth Rubber Co., Stoughton, Mass.

## Canoe Beds.

Hodgman Rubber Co., New York.

## Carriage Ducks and Drills.

Cleveland Rubber Co., Cleveland, O.  
Empire Rubber Mfg. Co., Trenton, N. J.  
Kureka Rubber Mfg. Co. of Trenton.  
Gutta Percha & Rubber Mfg. Co. of Toronto.

## Clothing.

Apsley Rubber Co., Hudson, Mass.  
Canadian Rubber Co. of Montreal.  
Cleveland Rubber Co., Cleveland, O.  
Granby Rubber Co., Granby, Quebec.  
Gutta Percha & Rubber Mfg. Co. of Toronto.  
Hodgman Rubber Co., New York.  
La Crosse (Wis.) Rubber Mills Co.  
North British Rubber Co., Ltd., Edinburgh.

## Cravenette.

Cravenette Co., Ltd.

## Diving Dresses.

Hodgman Rubber Co., New York.

## Dress Shields.

Hodgman Rubber Co., New York.  
Mattson Rubber Co., New York.

## Horse Covers.

Hodgman Rubber Co., New York.

## MACKINTOSHED GOODS.

## Leggings.

Cleveland Rubber Co., Cleveland, O.  
Hodgman Rubber Co., New York.

## Mackintoshes.

[See Clothing.]

## Proofing.

Canadian Rubber Co. of Montreal.  
La Crosse (Wis.) Rubber Mills Co.  
Milford Rubber Co., Boston.  
Plymouth Rubber Co., Stoughton, Mass.

## Rain Coats.

Cravenette Co., Ltd.

## Rubber Coated Cloths.

Mechanical Fabric Co., Providence, R. I.

RUBBER  
FOOTWEAR

## Boots and Shoes.

American Rubber Co., Boston.  
Apsley Rubber Co., Hudson, Mass.  
Boston Rubber Shoe Co., Boston.  
Canadian Rubber Co. of Montreal.  
L. Candee & Co., New Haven, Ct.  
Granby Rubber Co., Granby, Quebec.  
Gutta Percha & Rubber Mfg. Co. of Toronto.  
Hood Rubber Co., Boston.  
Jersey Rubber Shoe Co., New York.  
Liverpool Rubber Co., Liverpool, Eng.  
Lycorning Rubber Co., Williamsport, Pa.  
Meyer Rubber Co., New York.  
National India Rubber Co., Boston-Providence.  
North British Rubber Co., Ltd., Edinburgh.  
United States Rubber Co., New York.  
Wales-Goodyear Rubber Co., Boston.  
Woonsocket Rubber Co., Providence.

## Heels and Soles.

Boston Woven Hose & Rubber Co.  
Canadian Rubber Co. of Montreal.  
Continental Caoutchouc & Guttapercha Co., Hanover.  
Plymouth Rubber Co., Stoughton, Mass.

## Tennis Shoes.

American Rubber Co., Boston.  
Boston Rubber Shoe Co., Boston.  
Granby Rubber Co., Granby, Quebec.  
Liverpool Rubber Co., Liverpool, Eng.  
National India Rubber Co., Providence.  
United States Rubber Co., New York.

## Tennis Soles.

Canadian Rubber Co. of Montreal.  
Jos. Stokes Rubber Co., Trenton, N. J.

## Wading Pants.

Canadian Rubber Co. of Montreal.  
Hodgman Rubber Co., New York.

SPORTING  
GOODS

## Foot Balls.

Canadian Rubber Co. of Montreal.  
Cleveland Rubber Co., Cleveland, O.  
Faultless Rubber Co., Akron, Ohio.  
B. F. Goodrich Co., Akron, O.  
Hodgman Rubber Co., New York.

## Golf Balls.

Boston Belting Co., Boston.  
Canadian Rubber Co. of Montreal.  
Davidson Rubber Co., Boston.  
B. F. Goodrich Co., Akron, O.  
Whitman & Barnes Mfg. Co., Akron, O.

## Submarine Outfits.

Hodgman Rubber Co., New York.

## Sporting Goods.

Canadian Rubber Co. of Montreal.  
Faultless Rubber Co., Akron, Ohio.  
B. F. Goodrich Co., Akron, O.  
Hodgman Rubber Co., New York.  
Tyer Rubber Co., Andover, Mass.

## Striking Bags.

Canadian Rubber Co. of Montreal.  
Faultless Rubber Co., Akron, Ohio.  
B. F. Goodrich Co., Akron, O.  
Pure Gum Specialty Co., Barberton, O.

## Dental Gum.

American Hard Rubber Co., New York.  
Cleveland Rubber Co., Cleveland, O.  
Tyer Rubber Co., Andover, Mass.

DENTAL AND  
STAMP RUBBER

## Rubber Dam.

Cleveland Rubber Co., Cleveland, O.  
Davol Rubber Co., Providence, R. I.  
Hodgman Rubber Co., New York.  
Tyer Rubber Co., Andover, Mass.

## Stamp Gum.

Mattson Rubber Co., New York.  
Mechanical Rubber Co., Chicago, Ill.  
N. J. Car Spring & Rubber Co., Jersey City, N. J.  
New York Belting & Packing Co., N. Y.

## ELECTRICAL

## Electrical Supplies.

American Hard Rubber Co., New York.  
Lake Shore Rubber Co., Erie, Pa.  
Joseph Stokes Rubber Co., Trenton, N. J.  
Massachusetts Chemical Co., Boston.  
Tyer Rubber Co., Andover, Mass.

## Friction Tape.

Boston Belting Co., Boston.  
Boston Woven Hose & Rubber Co.  
Canadian Rubber Co. of Montreal.  
Cleveland Rubber Co., Cleveland, O.  
B. F. Goodrich Rubber Co., Akron, O.  
Massachusetts Chemical Co., Boston.  
Mechanical Rubber Co., Chicago.  
Home Rubber Co., Trenton, N. J.  
Revere Rubber Co., Boston-New York.  
Whitman & Barnes Mfg. Co., Akron, O.

## Hard Rubber Goods.

American Hard Rubber Co., New York.  
Canadian Rubber Co. of Montreal.  
Joseph Stokes Rubber Co., Trenton, N. J.

## Insulating Compounds.

Canadian Rubber Co. of Montreal.  
Gutta-Percha & Rubber Mfg. Co., Toronto.

Massachusetts Chemical Co., Boston.

## Insulated Wire and Cables.

National India Rubber Co., Providence.

## Splicing Compound.

Home Rubber Co., Trenton, N. J.

## MISCELLANEOUS

## Architect and Engineer.

Herbert S. Kimball, Boston.

## Cement (Rubber).

Boston Belting Co., Boston.  
Canadian Rubber Co. of Montreal.  
B. F. Goodrich Co., Akron, O.  
Manhattan Rubber Mfg. Co., New York.  
N. J. Car Spring & Rubber Co., Jersey City, N. J.  
New York Belting & Packing Co., N. Y.

## Chemical Analyses.

Durand Woodman, Ph. D., New York.  
H. L. Terry, Manchester, England.

## Chemists.

Stephen P. Sharples, Boston, Mass.  
Durand Woodman, Ph. D., New York.

## Investments.

Badger Mexican Plantation Co., Racine, Wis.  
Conservative Rubber Production Co., San Francisco.  
Hidalgo Plantation and Commercial Co., San Francisco.

## Rubber Lands For Sale.

O. H. Harrison, San Francisco.

## Rubber Planting.

Badger Mexican Plantation Co., Racine, Wis.  
Conservative Rubber Production Co., San Francisco.  
Hidalgo Plantation and Commercial Co., San Francisco.  
J. P. William & Bros., Heneratgoda, Ceylon.

## Rubber Tree Seeds.

J. P. William & Bros., Heneratgoda, Ceylon.

## Thermometers.

Hohmann & Maurer Mfg. Co., Rochester, N. Y.

## Travel.

Hamburg-American Line, New York.



MACHINERY AND SUPPLIES FOR RUBBER MILLS.

**RUBBER MACHINERY**

**Acid Tanks.**  
Birmingham Iron Foundry, Derby, Ct.

**Ball Making Machine.**  
H. Bestorff, Hanover, Germany.

**Band Cutting Machine.**  
A. Adamson, Akron, O.  
Birmingham Iron Foundry, Derby, Ct.

**Belt Folding Machines.**  
Birmingham Iron Foundry, Derby, Ct.  
Farrel Foundry & Mach. Co., Ansonia, Ct.

**Belt Slitters.**  
Birmingham Iron Foundry, Derby, Ct.  
Farrel Foundry & Mach. Co., Ansonia, Ct.

**Belt Stretchers.**  
Birmingham Iron Foundry, Derby, Ct.  
Farrel Foundry & Mach. Co., Ansonia, Ct.  
Hoggson & Pettis Mfg. Co., New Haven, Ct.

**Blowers.**  
B. F. Sturtevant Co., Boston.

**Boilers.**  
William R. Thropp, Trenton, N. J.

**Braiders.**  
New England Butt Co., Providence, R. I.

**Buckles.**  
The Weld Mfg. Co., Boston.

**Calenders.**  
Birmingham Iron Foundry, Derby, Ct.  
Farrel Foundry & Mach. Co., Ansonia, Ct.  
Textile-Finishing Machinery Co., Providence, R. I.

**Castings.**  
A. Adamson, Akron, O.  
Birmingham Iron Foundry, Derby, Ct.  
Farrel Foundry & Mach. Co., Ansonia, Ct.

**Chucks (Lathe).**  
Hoggson & Pettis Mfg. Co., New Haven, Ct.

**Churns.**  
American Tool & Machine Co., Boston.

**Cloth Dryers.**  
Birmingham Iron Foundry, Derby, Ct.  
Farrel Foundry & Mach. Co., Ansonia, Ct.

**Clutches.**  
Farrel Foundry & Mach. Co., Ansonia, Ct.

**Crackers.**  
Birmingham Iron Foundry, Derby, Ct.

**Devulcanizers.**  
Birmingham Iron Foundry, Derby, Ct.  
Edred W. Clark, Hartford, Ct.  
William R. Thropp, Trenton, N. J.

**Dies.**  
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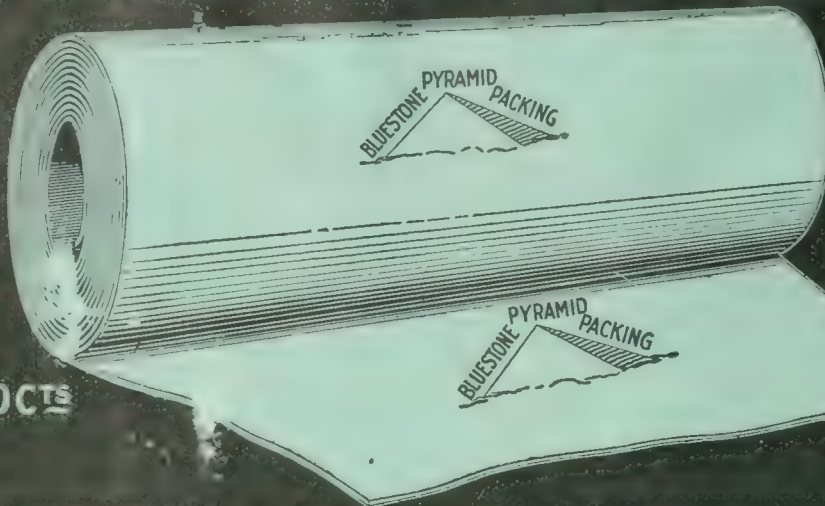
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Edited by HENRY C. PEARSON—Offices, No. 150 Nassau Street, NEW YORK.

Vol. XXXI. No. 4.

JANUARY 1, 1905.

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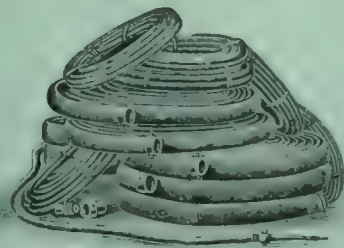
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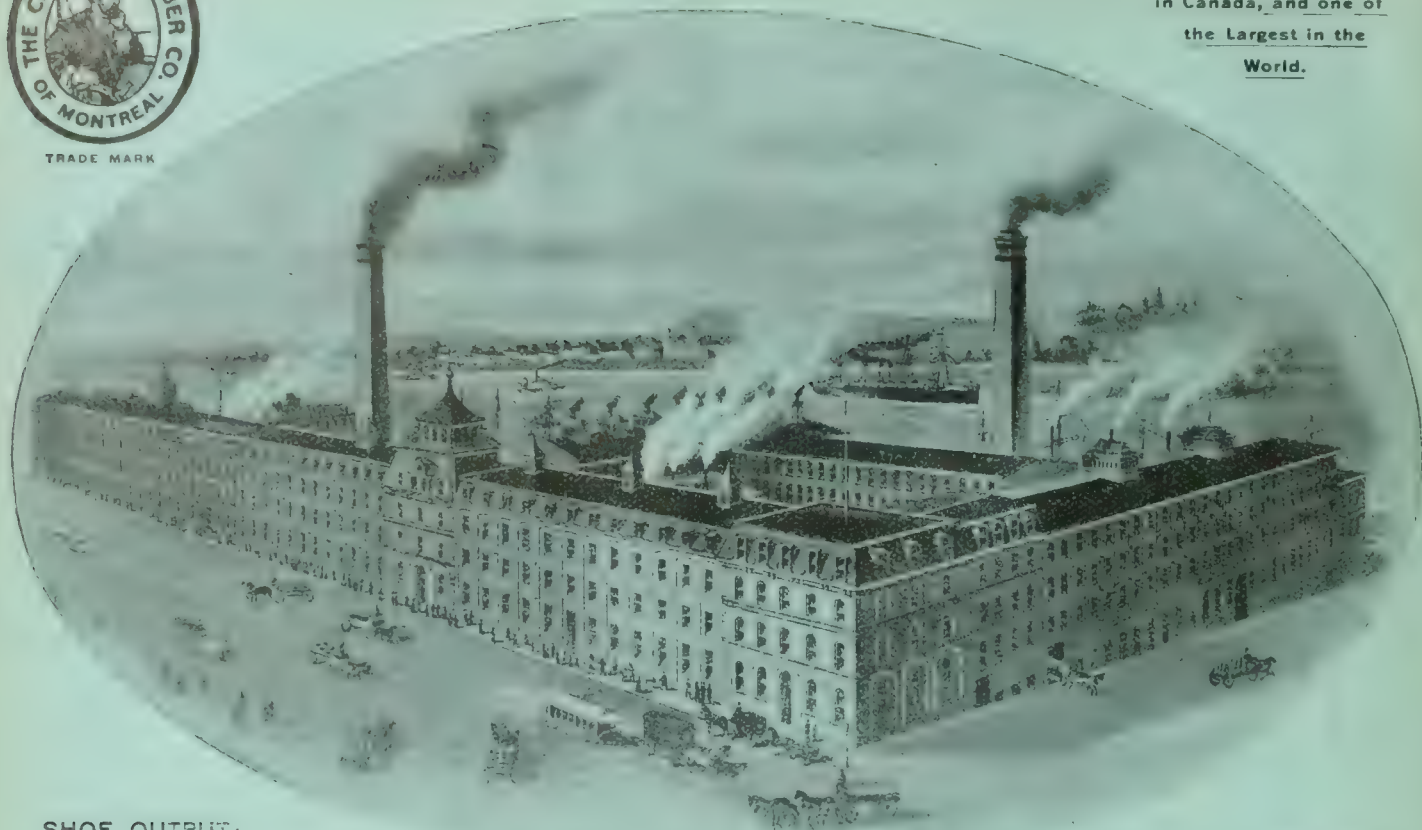
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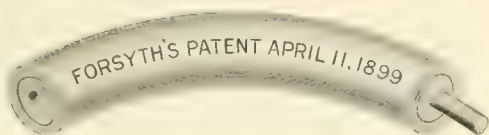
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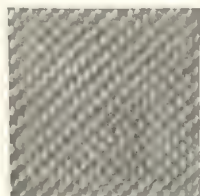
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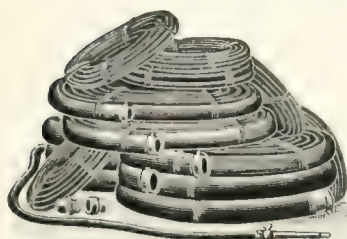
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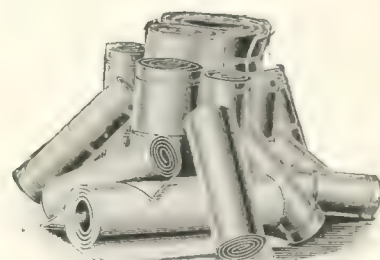
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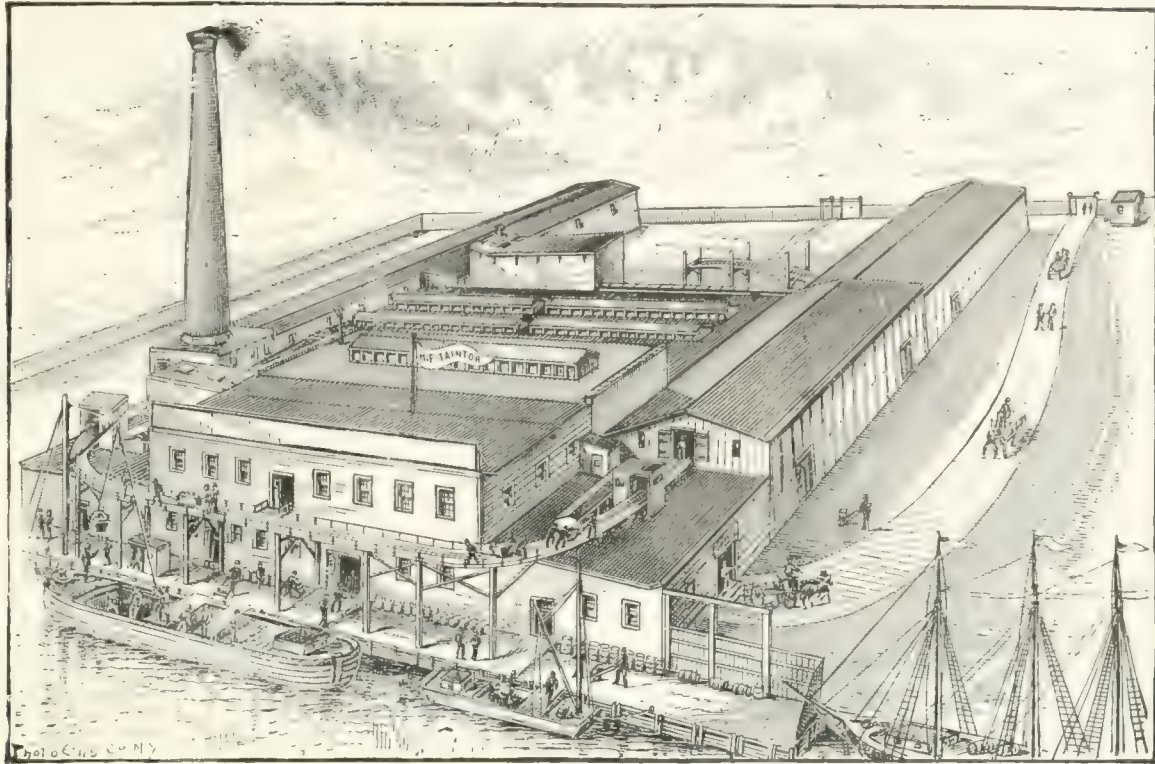
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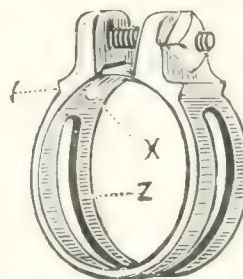
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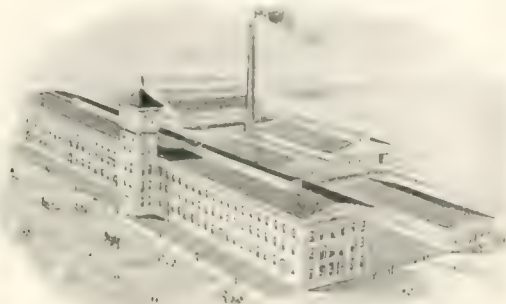
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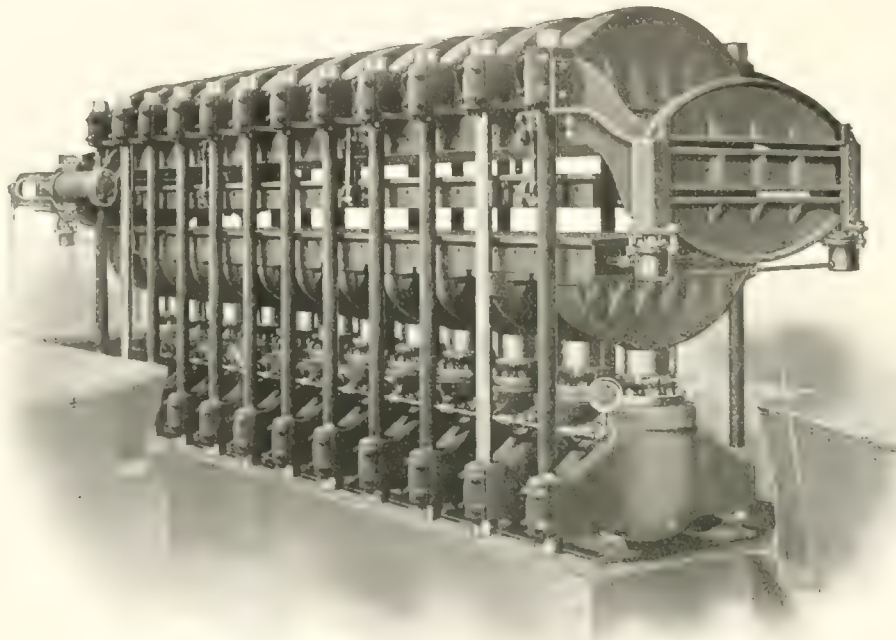
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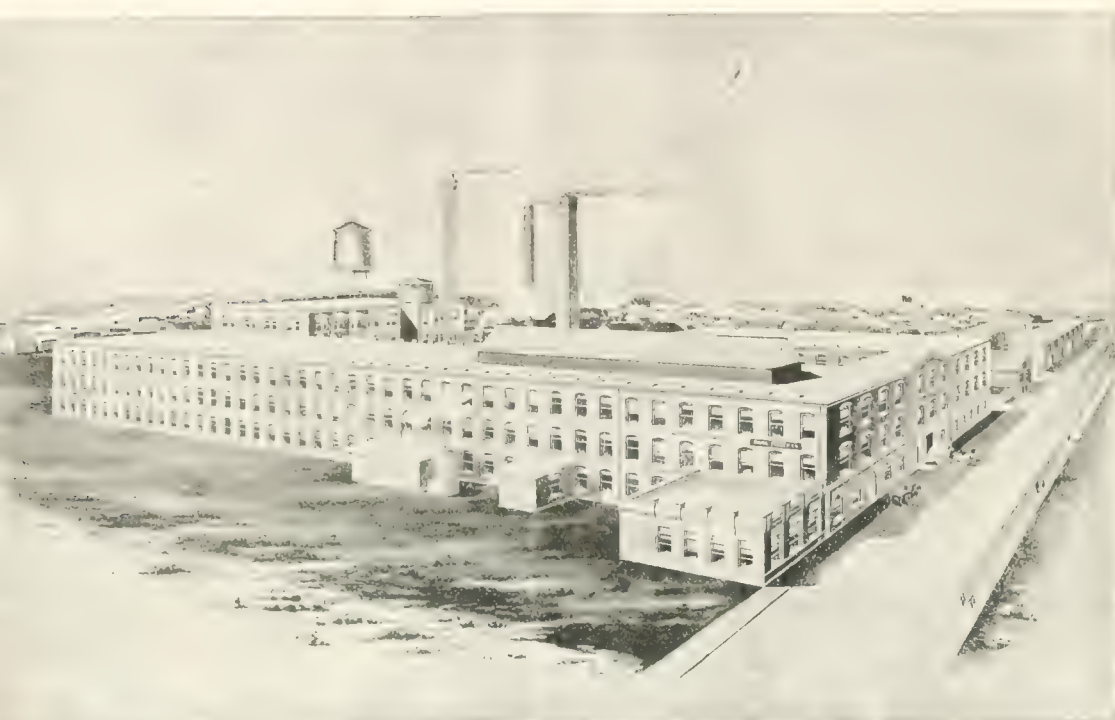
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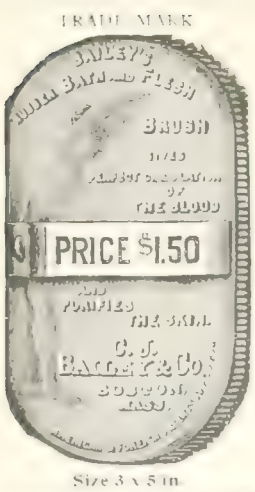
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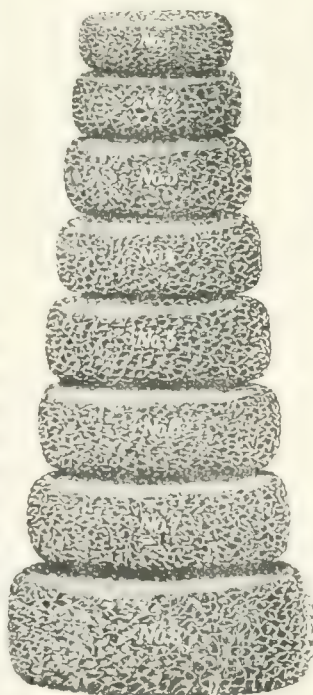
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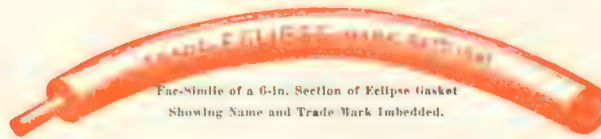


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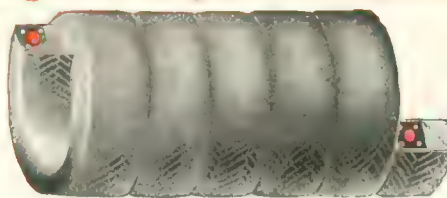
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## THE NATURAL SUPPLY OF RUBBER.

WE have been asked to reconcile certain expressions which have appeared in these columns, regarding the narrowing limits of the natural supplies of India rubber, with the fact that the consumption of the material steadily increases. This we do not regard as a difficult task, if the various articles on the subject already printed be read in their intended connection, one with another.

During the past ten years the imports of raw rubber into the United States have nearly doubled. If we use the official customs returns, for the fiscal years ending June 30, the comparison is as follows:

	Pounds.	Pounds.
1893-94.....	33,737,783	1903-04..... 59,015,651

Meanwhile the imports for consumption in other countries probably have increased at a corresponding rate. How, then, can the rubber supply be said to show a decline?

The rate of production has *not* shown a decline. But that is not the question. The natural supplies of rubber are no greater now than at any given date in the past. The natural rubber area is no greater now than 50 years ago. But meanwhile the yearly production of rubber has increased a hundred fold. The point to be made is that this rate of increase must sometime reach a limit. The limit has already been reached in a great number of regions which might be named. In THE INDIA RUBBER WORLD of October 1, 1902 (page 8), was presented a diagram showing the steady growth of the rubber output of Colombia from almost nothing, in 1860, to upwards of 7,000,000 pounds in 1873, from which time there was a rapid decline to the present average of much less than 1,000,000 pounds a year. In the last issue of this Journal it was shown that the British colony of Lagos, in West Africa, exporting 5867 pounds of rubber in 1894, produced two years later nearly 6,500,000 pounds, since which time there had been a steady falling off to 131,311 pounds in 1903 (the date of the latest returns). The same experience is to be recorded from very many other districts, for reasons which are indicated in a contribution from Mr. Georg Waldau, on another page of this issue.

America has consumed millions of pounds of rubber obtained from Africa, and produced by processes which enabled a full grown man to get together one pound of the material by working a week on roots torn from the ground. A second crop of roots was never obtainable in the same area. The great bulk of the African rubber output to-day is from *lianes* (creepers) which never yield a product but once. All the rubber imported from South America under the name of "Caucho" is obtained by cutting down the trees which yield it.

The fact that rubber has so long been obtainable is due to the enormous original supply. But this supply has not been increased, or even kept up to the original limits, by any process of nature, and the rubber situation to day is comparable to a private fortune of fixed limits, which is diminished in proportion as its owner draws upon it. He may spend twice as much this year as last, but this does



not make him twice as rich ; it only hastens the time when he will become bankrupt.

The same customs returns from which we quoted above give the following as the import values of the rubber covered in the statistics of the two years under consideration :

1893-94 . . . . . \$15,077,903      1903-04 . . . . . \$40,444,250

The chief significance of these figures is that the average import value of rubber—good, bad, and indifferent—has increased, in ten years, from 44.6 cents to 68.4 cents per pound. Is such an increase—amounting to more than 53 per cent.—explainable on any other ground than that rubber supplies have not been developed at a rate commensurate with the increase in the consumption of rubber?

It is quite possible that, somewhere or other, more rubber may be produced next year than this. It is out of the question to say in what year the highest output of rubber will be reached. Possibly higher prices for rubber than have been known hitherto are yet to be experienced. But there is no room for uncertainty on two points : (1) A continued increase in the industrial demands for rubber ; and (2) the hastening of the extinction of the natural supply by every addition to the yearly production.

#### THE FATE OF ONE MONOPOLY.

THE career of the Dunlop tire company, reviewed at some length in another column, affords one of the most interesting chapters in the history of monopoly in trading. The outcome is of especial interest as illustrating the lack of foundation for the fears so often expressed that the interests of the masses are endangered by monopolies. The fact is that any commercial enterprise founded upon an economic fallacy must soon succumb by reason of its inherent weakness, as we have previously pointed out in discussing the so-called "trusts." In industrial and commercial development new forms of organization become necessary from time to time, and in taking the first steps in an untried field mistakes may be made, but nowhere are mistakes so speedily recognized and mended as where large capital is involved. For which reason alarmists over the evils of "monopoly" often find that the objects of their attacks have disappeared while they are still shouting—but not on account of the noise made over them.

The Dunlop tire company was not a "trust," and the monopoly which it was intended to exercise was one deemed wholly legitimate, both in law and by public opinion, being based upon a patent grant, and involving the right of an inventor, for a term of years, to the exclusive profits from his discovery. But the plans of the company were based upon two assumptions, both of which proved ill founded. The bicycle tire demand diminished, instead of growing constantly ; and British patent law underwent a new construction. There are business principles as old as the world and that give no promise of change. So long as there are human wants to be met, those who cater to them honestly are entitled to a profit ; this is sound trading. The Dunlop company, however—and we refer to this only as an illustration, and because of its one-time

great prominence—involved something more than this.

The bicycle tire being deemed a permanent necessity, and the Dunlop patent impregnable, an almost fabulous amount of capital was subscribed, with the idea that throughout the life of the patent users of tires could be taxed to pay dividends upon that capital, without regard to the cost or actual value of the wares supplied to the public. The first result was that the high prices charged afforded a constant temptation to rival manufacturers to infringe the patent, from which they could not be dissuaded wholly by hundreds of actions at law brought by the Dunlop company. Secondly, by reason of this constant litigation, employing in one way or another the ablest legal and judicial minds in the kingdom, practically new patent law was created, as Chairman Du Cros recently told his shareholders, the result of which weakened the position of the company materially.

The recent expiration of the Dunlop patent ended the monopoly upon which the company was founded, but the directors have managed to convert the company into a manufacturing concern—which it was not, originally—prepared to take its place in the rubber industry on equal terms of competition, and where its profits will depend upon the amount of actual capital involved and the measure of business ability displayed.

As has been observed, the Dunlop monopoly was based upon a patent grant alone, and, therefore, no question of its legitimacy was raised. There has been no wiser provision of law in any country than that intended to secure due rewards to inventors and thereby promote progress. But any dividends paid upon the £2,000,000 in shares which Mr. Ernest Terah Hooley obtained for his part in promoting the Dunlop company—and which he subsequently disposed of at an advantage—could hardly be looked upon as a reward to the patentee of the tire. The manufacturing plants which the Dunlop company have been able to create out of the profits of their tire trading during the life of the patent are a subject for congratulation to the company alone ; they are of little concern to the inventor of the tire.

We doubt not that in every country the question will yet arise as to how far a monopoly can be maintained in respect of an article of general utility, whether controlled by the inventor or by his assigns, beyond paying him a fair return, having regard to the value of the invention to the public. The weak point in the great company above referred to was in attempting to exact from the public a heavy tribute for the benefit of persons who had not conferred a corresponding benefit upon the public. The permanent success of such an undertaking for exacting excessive prices from the public would, of course, work great injury. But by the company's own confession their monopoly came to an end even before the expiration of their patent, which is only another confirmation of our view that the world is not in danger of going to the dogs because of "monopolies."

It does not follow that any single individual concerned in the matter from first to last, including Mr. Hooley, the promoter, acted in any case otherwise than in perfect good

faith and within his full legal rights, but now that the history of the patent is closed, it may be referred to as suggesting reasons for revising, in theory and practice, the application of the patent laws, to the extent of limiting even the temporary success of such attempts at monopoly as made the Dunlop company conspicuous.

THE INVENTOR OF A VEHICLE TIRE recently patented states in his specification that it "is preferably made of a high grade of Gutta-percha," whereas it is probable that he has never seen any Gutta-percha, and that this material is not at all adapted to the purpose described. If inventors, patent attorneys, and the patent office itself are so careless in the use of the terms "Rubber" and "Gutta-percha," it is not strange that a great part of the public should regard both as referring to the same substance.

"THE MAN WITH THE GUM SHOE is almost as extinct as the dodo," says the able *Mirror and Farmer*, of Manchester, New Hampshire, in an editorial in which, incidentally, some statements made by THE INDIA RUBBER WORLD are described as being "of especial interest and value." If the New Hampshire editor is still disposed to give weight to anything which may appear in this Journal, we beg to suggest that he would better confer with the rubber footwear manufacturers before again making such an assertion as that nowadays "most men find it unnecessary to incase their shoes in rubber sandals, even in rainy weather." If the present winter should continue as it started out, the profits of the rubber shoe business may be expected to break all records.

WE MIGHT BE PARDONED FOR EXPRESSING WONDER at how the able St. Louis *Republic* obtained certain information which appeared in the editorial columns of its issue of November 30. But on second thought we have decided to withhold such expression, in view of the matchless enterprise, combined with the marvelous and comprehensive intelligence, which characterizes the modern daily newspaper. All things are possible to the press; at least nothing is hidden from it. The information we refer to is stated in the following words:

The Rubber Trust is rubbering around in Washington, looking for more protection. It has already increased the price of its goods three times during the year.

As everybody knows, the trusts work in the dark; nothing so disconcerts them as to have the newspapers expose their deeds. We feel that the rubber trust never meant to have it known that the price of its goods had been increased, and now that the truth has come out, we shall watch with interest the effect upon the trade. Also, the effect upon the rubber trust. We could wish that the able St. Louis editor had gone further, and worked out this problem: If the rubber trust can increase the price of its goods three times within a year with such protection as it has, how often could it make such increases with "more protection"?

THE COMPLIMENTS OF THE SEASON to the editor of the La Vista *Advertiser*, of Colorado! Writing in his paper of "the lately discovered Colorado rubber plant," he says: "We tried to stir up some interest in the matter last year." But the sample he had then "was dried up and too small to properly recognize." Hence no progress in 1904. But 1905 is going to be a great year, and we doubt not that the editor of the *Advertiser* will soon obtain a specimen plant of generous size, which he

will keep well watered through the constant operation of a garden hose, and that he will succeed in stirring up so much interest as to win for himself the first niche in the Hall of Fame which is being erected for the discoverers of rubber in Colorado.

WAS THERE EVER MORE EXTREME CAUTION shown than appears in the latest business report of the Société La Haute Sangha, a Paris company trading in rubber in the French Congo? With assets stated at 1,906,668.76 francs, one branch of their undertaking is set down at the following remarkably modest valuation:

Plantations..... 1 franc.

The explanation given is that it is impossible to state the present actual value. Suppose every planting company was equally solicitous not to excite in the minds of the stockholders a too lively sense of the value of its plantation!

### MECHANICALLY ATTACHED TIRES.

[FROM "THE HORSELESS AGE," NEW YORK.]

THE records of the patent office would seem to indicate that a considerable amount of mental energy is being expended throughout the country at the present time in the conception and working out of mechanically attached pneumatic tires. Hardly a week passes but one or more patents are granted on devices of this kind; and while it is not yet in the class with the non-refillable bottle, it seems likely that it soon will have assumed as many different shapes, and, like its older rival, will have accomplished no good beyond furnishing a source of income to the patent attorneys.

Tires of this type are all much alike in general construction. In fact, the requirements, in so far as attaching and detaching are concerned, are restricted, and the possible structural combinations so few that inventors have a narrow field in which to exercise their powers of origination, and their results must perforce be nearly alike. Yet so diligently do they stick to their self-imposed tasks, and so numerous are they, that one is prone to inquire what they are seeking. Is it the solution of the tire problem? If so, they are like marksmen who shoot well but know not where to aim, for the solution does not lie in the direction in which they are working.

Real tire trouble consists not in the difficulty experienced in removing a tire from or attaching it to a rim, but rather in the cause which makes its removal necessary, and the motorist is not looking with nearly so much anxiety for the tire that can be easily removed as for the tire that need not be removed. So far as he is concerned, if his tires will stay in proper condition it matters not by what means they are attached, and if his tires do not remain in proper condition the ease or difficulty with which he can remove a quantity of damaged rubber and fabric from the rim of a wheel and substitute for it a new tire of substantial value in dollars and cents usually gives him less concern than does the cost of the operation.

It would seem to be more to the point if those with inventive inclinations who are now working on mechanically attached pneumatic tires were to divert their attention to the production of a tire which will have lasting qualities. Undoubtedly long strides have been made in the development of this tire, especially during the past year, when the proper construction of the fabric to be used and the quality of rubber to be employed have, more than ever before, been made subjects for scientific study, but perfection is still a long way off. However, with a greater number struggling along there is increased likelihood that some one will eventually reach the goal.



## A SELANGOR RUBBER PLANTER.

AN important influence in the development of the cultivation of India-rubber in the Far East has been exerted by Mr. Edward Valentine Carey, whose portrait appears on this page. Going out to Ceylon from England 23 years ago, Mr. Carey addressed himself seriously to the study of tropical planting, with the idea of outlining for himself a career in this field, and was successively interested in the planting of coffee, cinchona, and tea, with the result that during 11 years he had acquired an unusually extensive experience as a planter. Twelve years ago he was attracted to Selangor, in the Federated Malay States, where he has since resided. From the beginning he was recognized there as having a sound knowledge of the best methods of planting, and was warmly welcomed by his predecessors in that colony, who were endeavoring to make planting profitable there.

Soon after Mr. Carey's removal to Malaya the resident planters choose a committee of three to look after the promotion of their interests in common, consisting of Messrs. Carey, Stephenson, and Huttenbach. The result of their work was so satisfactory as to demonstrate the advantages of concerted efforts, and a planters' association was organized for the state of Selangor, and later in each of the other states, and eventually the United Planters' Association for the Federated Malay States. Mr. Carey was the first chairman of the Selangor Planters' Association, holding this position from 1892 to 1899. He was then chosen chairman of the United Planters' Association in 1899, holding this position for four years, when, in 1903, he was succeeded by Mr. W. W. Bailey.

Identified always with the most progressive features in planting, Mr. Bailey was early among those in the Malay States to see the advantages from planting rubber, and in 1897 he became actively interested in this new branch of industry. He studiously devoted himself to the study of the best practice, in whatever country, in the planting of rubber, with a view to adopting whatever was especially fitted to his own locality, so that he has from the beginning taken a front rank among rubber planters in his colony, and he is now in charge as manager of a number of estates in Selangor on which rubber planting is the sole or the leading interest. It should be said here that the planting interest both in Ceylon and the Federated Malay States is largely conducted by incorporated companies, the shares of which are held not only in the colonies but in Great Britain, and it is high testimony to one man, that he should have the direction of a number of plantations. The more important estates in Mr. Carey's charge to-day are the "Bukit Rajah," "Sungei Binjai," and "Klanang," all near Klang, which is Mr. Carey's place of residence in the state of Selangor.

All told, there are now under Mr. Carey's charge some 500,000 rubber trees, on about 2000 acres of land. Part of this rubber is planted alone, while the remainder is interplanted with other crops, mainly coffee. Of course, in the latter case the idea is that ultimately the rubber will take the place of all the other growths, especially as coffee is no longer so profitable a crop in any country as when Mr. Carey first went to the

Far East. The rubber under cultivation under Mr. Carey's direction is mainly of the *Hevea* species, though he has done considerable planting of *Hevea* in connection with *Ficus elastica*, there being in his judgment certain advantages from the interplanting of these species, in regard to which THE INDIA RUBBER WORLD hopes to be able a little later to present a report by Mr. Carey.

A very high compliment was paid to Mr. Carey by the planters of the Malay States, when, on the eve of his leaving the colony for an extended vacation, on September 17 last, the members of the United Planters' Association entertained him at dinner and delivered to him an address setting forth their great appreciation of his work in the advancement of the agricultural interests of the colony. Mr. Carey in his response to the address reviewed the history of planting in general in the Malay States, after which he came to the question of rubber. While overproduction of coffee had been experienced, he felt that it would be a long time before anything of the kind could be true of rubber. At present less than 1 per cent. of the world's requirements in rubber was afforded by cultivation. Referring to the recently obtained high prices for cultivated

rubber he said: "Even if this were placed on the market at as low a price as 2 shillings, they would still be able to make a profit of 50 per cent.—a fact which made the rubber industry one of the most profitable ever known."

While he did not fear any danger in our time from overproduction, he cautioned the planters to be on the lookout for the possibility of disease creeping in, and to do everything in their power to guard against it by having the best possible expert advice. In one respect the planters of the Federated Malay States were especially fortunate, namely, in having the interested support of their government. In this connection, by the way, the appointment of an agricultural expert by the government—Mr. J. B. Carruthers, lately of Ceylon, who has become director of agriculture for the Federated Malay States at what is understood to be a

liberal salary—bears out Mr. Carey's assertion respecting the policy of encouragement by the government to the planting industry.

Following the proceedings above reported, Mr. Carey went to Java in the capacity of labor commissioner for the Straits Settlements and the Federated Malay States, and succeeded in arranging for the importation of Javanese on terms which promise to render their employment as agricultural laborers most desirable, in view of the limited supply of native labor in various districts. Here, again, the government showed its liberal disposition toward the planters by making a liberal grant for the free transportation of the imported laborers. It must be understood that in Malaya, where tin mining hitherto has formed the most important field for the employment of labor, planting on the new scale which has been adopted is obliged to compete with the mining interest, and there must result at times scarcity of labor for the plantations.

Mr. Carey subsequently visited the United States, taking occasion to see the World's Fair at St. Louis, and has since gone to Europe, with a view to visiting his home before returning to Selangor.



EDWARD V. CAREY.

## EXPLORING FOR "CASTILLOA" RUBBER IN PANAMA.

*Experiences of The Editor of "The India Rubber World."*

## SECOND LETTER.

Camp Rio Negro.—Roughing It.—Story of a Bridge.—*Castilloa* Groves.—Birds, Animals and Reptiles.—Cruz, the Hunter.—Trips of Exploration.—Chiquita, the Commodore, and "Mula Grande." Coagulating Rubber with Amole Juice.—Native Rubber Manufacture.—Llanos.—Don Raimon and Donna Maria.—A Treasure Hunt.

OUR plan at first, on coming ashore on the Azuero peninsula, had been to camp right where we landed but the "heng-hengs" (rodadores) were so troublesome that another spot had been chosen some eight miles inland, and having turned our belongings over to the *mozos*, we started over the trail for camp Rio Negro. The Commodore led, because he had brought his shotgun and planned to shoot something for supper. He made a gallant figure, striding along the trail in rubber soled shoes, and had deer or turkey appeared would certainly have dropped it. But the game was wary, and the only creature that dropped was the hunter himself when he inadvertently trod on a slimy log and sat down in a pool of water.

The trip took about three hours and led uphill slightly all of the way. The trail was fair, and ran through a sort of open forest, where there were many huge trees but not much of the dense jungle that is so often to be found in the tropics. The soil was a gravelly loam, with a clay underlay, and seemed to be rich, and the beds of the brooks and creeks were of hard gravel and boulders. All along the trail were *Castilloas*, sometimes singly and often in clumps. None of them was over 12 inches in diameter, and most of them had been tapped. Now and then was one that had been felled a year or two before, and frequently we saw stumps of what must once have been fine, large rubber trees.

Eight miles is a long distance in the tropics, and though lightly clad and walking slowly, we were soon very warm and wet through with perspiration. The Pioneer ventured the prediction that this was the last long tramp upon which the Commodore would carry an eight pound gun, and his prophecy came true. Even long journeys end, however, and after fording the Palo Secco, and a little later the Negro river, we emerged into a fine grove of *Castilloas*, and fronting it a palm thatched house that was to be our base of operations for many days. An hour later the mules arrived with the navy bags, and within fifteen minutes we were in dry clothing, had hammocks slung, and were ravenously watching the cook prepare supper of jerked venison, bacon, dago bread, and coffee. Later he made delicious chocolate, using condensed milk and serving it in calabashes. Just here—the supper and its preparation sug-

gests it—let me say that the little camping stove was all right, but three stones between which the fire was built were just as good, while a candle box made a fine molding board. So too, with the hip boots of rubber—they kept us dry a couple of times in fording creeks, but it was so much easier to slop right through and dry out on the march that we didn't bother with them after the first day or two. It was lucky, however, that there were ample stores of rice and salt, for the natives had neglected to clear and plant during the dry season just preceding our visit and the whole countryside was on the verge of starvation. Not that they worried about it particularly; they simply ate what they could get and contentedly waited for the next dry season to come around.

Our first night in camp we slept part of us in hammocks and part on a platform of poles under which the *mozos* crept when the evening rain came on. The Pioneer kept a lantern burning, as he said it scared away the vampire bats. It did not frighten the insects, however, for the morning light showed four white men well speckled with red spots. Just what the insect was could not be discovered, but it was most industrious. I counted 57 well defined bites between knee and ankle, and there were others. I also discovered how to scratch these bites and suffer no ill effects, and Oh! the joy of such scratching! The remedy was a 5 per cent. solution of formine applied to the surface after an orgy of scratching. In two hours after the application all the poison either from bite or finger nails wholly disappeared. It being Sunday, our *mozos* piously refrained from work, but in spite of their scruples they



INTERIOR OF CAMP RIO NEGRO.

were induced to build a shelter for themselves, which they finally did, getting the roof on just before the afternoon down-pour of rain began.

In speaking of the lack of enterprise that the natives show it must not for a moment be imagined that they are behind the times in everything. In the utilization of public money, for example, they could give Tammany Hall points of value. To cite an instance: The home government at Panama city appropriated \$3000 for the building of a bridge over a river that flowed near a certain town. Shortly after that one of the holders of the fund approached the Pioneer and asked for an estimate as to the cost of putting up the bridge, remarking that he had \$2000 for it. The Pioneer offered to do it for that sum, but the next morning, when the papers were to be drawn, there remained only \$1500. Then the trustee proposed that a \$750 bridge be built and that he and the Pioneer



divide \$750. It took some trading to arrange that, and before it was finished there was left but \$600. Then apparently all of the officials got a slice, for two days later there was but \$10 left. Nor has the bridge ever been built, but there is still an excellent ford, which appears to suit the people just as well. They thus, it will be seen, equal us in distribution of government appropriations, and outclass us in some forms of piety. One of our rubber cutters, for example, bore the name of Jesus Maria Dios—but he did not look the part.

During the forenoon I looked over the grove of *Castilloas* that fronted the house and found that most of them had been tapped that season. Indeed one of our *mozos* said that they had been tapped twice. The process of tapping here is quite different from that pictured by most who tell of the gathering of Panama rubber. They usually describe a series of zigzag cuts, running one into another from the base of the tree far up the trunk. Here each cut was individual, and made with two strokes, one horizontal, and the other slightly downward and joining the other so that a small slice of bark was taken out. In the lower part of the cut the thick *latex* gathers and is scraped into a *calabash* with the fingers. The trees as a rule were tapped as high as the native could reach, and frequently a rustic ladder or a rough staging enabled the gatherers to get higher up on the tree.

It seems that the plot of trees at Rio Negro were not self sown, but were planted by the Indian in his rice field after the crop was gathered. There were 105 trees on about an eighth of an acre of land, said to be four years old. The rest of the clearing had grown up to jungle, but where the rubber trees were it was quite clear and the trees big and lusty. Their condition made me wonder if the cleaning that is carried on by up-to-date planters is after all so much of a necessity as they believe.

Although it was Sunday all went in swimming in the swift Rio Negro, and also went fishing (with a stick of dynamite) but only got one. The swimming was not prolonged because of

the rodadors, that were quite troublesome. While in the water a band of brown faced monkeys expressed their disapproval of our Sabbath breaking by throwing sticks and branches at us from the tops of the lofty trees that hung far over the water. Speaking of the animals, there were deer, wild pigs, tapir, tiger cats, and jaguars, but they were rarely seen. Evidences of them were plenty, however. Once when we visited the *llanos* (grass plains), we saw where a jaguar had killed a two year old colt. For birds there were innumerable humming birds, a great variety of song birds, hawks, parrots, buzzards, cranes, grouse, doves, two kinds of wild turkeys, and the justly named "fire cracker bird." We saw no snakes, but iguanas and lizards were common.

The Indians think every kind of snake and even lizards and tree frogs poisonous. They, however, have what they assert is a sure cure for the bites of poisonous reptiles. After being bitten, if the sufferer will shut his eyes, reach behind, and select three leaves (any kind will do), quickly rub them together, and apply to the bitten part, a cure always results.

Our helpers were in part Indians, descendants of the Aztecs, and in part negroes from the Cauca. Of the former was Indolencia, whose strange complaining "monkey call" could be heard for miles. He always kept it up when alone in the woods, even if only a few hundred yards from camp. Of the latter was Cruz, a tall, loose jointed darkey, freshly pitted by smallpox. He was the hunter and was equipped with a muzzle loading "gaspipe" gun with a percussion lock. It was worth going miles to see him flush a turkey, locate

the tree in which it alighted, steal within range, and then snap cap after cap until finally the gun went off and the turkey dropped, oftentimes getting away even then.

As it would be impossible to examine carefully the whole of the 800 square miles in the month allotted to it, we first got the general lay of the land, then laid out trips through typical sections, estimated their areas and computed the number of trees. From Rio Negro camp (about 250 feet above the sea level) trails were cut north, south, east, and west. Then came long



INDIAN TAPPING A "CASTILLOA."



RUBBER CUTTERS AT RIO NEGRO CAMP.



COAGULATING RUBBER IN BALSA LOG.





WANCHO IN GROVE OF "CASTILLOA" PLANTED BY INDIANS.

and hard tramps, counting and measuring trees in typical blocks, and much questioning of native rubber cutters for a fair estimate of the conditions that obtained elsewhere. One fact soon impressed itself upon me. The *Castilloa* was certainly better adapted to flourish there than any other of the native trees. In spite of the war of extermination that had been previously waged against it, it was more abundant than any other single tree. It often happened that a group of from 40 to 50 could be counted from the trail, and it was a rare experience to go 25 feet in the lower forest without seeing at least one tree. While many of them were lofty, few were more than eight or ten inches in diameter. The very largest tree that I saw far up in a secluded mountain valley was not over 22 inches in diameter. The natives could always pick those that are the best milkers. As a rule these trees had a larger leaf area than the others, which accounts, I think, for the extra flow of *latex*. Those in the dense forest seemed to bear few seeds, while on the edges of the trails or in open places they were abundant seed bearers. There seemed to be no leaf or bark diseases, and even trees that had been mutilated the worst by the rubber gatherers seemed to be sound and healthy.

Exploration was, of course, greatly hindered by the heavy rains that came nearly every afternoon, and sometimes in the morning as well. These swelled the rivers so that fording was difficult and turned the steeper trails into muddy torrents. The shacks of Indians who were collecting rubber were often visited and deserted camps always examined. A camp usually consisted of a palm thatched leanto, just big enough for two men to sleep in, on a narrow pole covered bench. In one corner was a hole in the ground about two feet deep and 18 inches in diameter, to receive the rubber milk, and in which it was later coagulated. Three stones as big as a man's head formed the fireplace, with a bunch of dry sticks for fuel; *calabashes* for gathering, the *machete* for tapping, and the amole vine for coagulating, finish the tale of the rubber gatherers' equipment.

Although camp Rio Negro was headquarters, we were often obliged to make other camps for a few days. For example when examining the upper valleys 1000 feet above sea level a rubber gatherer's shack was our home for three days. Two things in particular were noted on this trip. The rubber trees rarely grew on the tops of the "hog backs" or ridges, but

on the sides, and in the valleys. Nor did it grow in wet lands at all. Then the seeding of the tree at that altitude was about a month later than on lands only from 50 to 300 feet above the sea.

There was much less game in the upper country, and, weary of tinned meats, it was not surprising that we tried and enjoyed parrot stew, or that monkeys should have been turned into rabbit stew—not big, black 25 pound monkeys, of which we shot several, but the little brown faced edible monkeys.

It is not to be supposed that all work was done on foot. Wherever it was feasible either horses or mules were used, and by following the ancient Indian trails we were able to save ourselves much time and toil. The horses were small, gentle stallions and quite surefooted. I said gentle, and so they were toward all of human kind, but when turned out to browse there were some very pretty stallion fights, but with no harm done. The mules were small, but strong, and made much trouble because they knew of the grass plains some miles away and were in the habit of stealing away at night and making for them. As the trails in some places were very steep I chose a little mule called Chiquita, and she proved to be a treasure. She could ford a swift running river and keep her feet, while the others were stumbling and half swimming. I verily believe she could climb a greased pole or slide down a log chute and never miss her footing, if she so elected. The Scout, the Pioneer, and the Prospector rode horses, while the Commodore, who was a trifle over 200 in weight, took the "*mula grande*" or big mule.

Speaking of the Commodore's mount, I thought he would have trouble, for that particular mule demanded the same treatment that the other mules received. I saw him watch me when I leaned forward in the saddle and eased Chiquita up a sharp rise by twisting my fingers in her mane. The Commodore, however, by reason of his stoutness, could not easily do this and so sat up straight. The big mule grew sullen, and finally, as we forded the Marieto, and climbed its steep, clayey banks, he suddenly stopped half way up, shook himself and began to tip slowly over backwards. Of course the Commodore slid off over his tail, and sat down in the river, and an instant later was holding the big mule in his lap. I ought not to have laughed, nor should I had not Chiquita turned around and winked at me.

I had long wished to see how the Indians coagulated the *latex* of the *Castilloa* by the addition of the juice of the amole vine and now had the opportunity, not once but many times. Usually the coagulation is done in a hole in the ground; if,



CRUZ, THE HUNTER, WITH WILD TURKEY.



however, they are very careful, and are possessed of an axe, they cut a trough out of a "balsa" log and use that. When there is sufficient milk for coagulation, a bunch of vines is gathered, folded together, and pounded on a log with a heavy billet of wood until all of the fibers are well bruised. The mass is then rinsed in water, the fluid being run through a sieve, and then poured into the trough. Extreme care is taken not to stir



WANCHO'S RUBBER TAPPING TOOL.

the *latex*. Instead, as it begins at once to coagulate on the top, the rubber is gently pressed down, gathering to itself other particles, and at the same time it is forced toward one side of the receptacle. Thus by gently manipulating, squeezing, and handling, most of the coagulated rubber is finally gathered into one piece, which is lifted out and kneaded until much of the water is out of it. Some more amole water is then poured into the remaining liquid and by the same sort of careful manipulation another smaller slab of rubber is secured. The two are then stuck together. A week later the milk white mass of rubber will be jet black, of about half its first weight, and apparently as dry as a bone. Unless it is cut into strips and washed and dried again and all of the amole liquor got rid of, it will sweat and deteriorate, and have a smell that makes it most offensive.

The *machete* is used altogether for tapping by the natives in Central America. Just by way of experiment I tried two different tools that I brought with me from New York. One was a sort of farrier's knife, that did pretty well, but was not heavy enough; the other was the type of tool that is now in general use in Ceylon. While it was possible to tap with this latter tool, it did not do for the *Castilloa* as well as for the *Hevea*. The strong fiber in the bark, unless the tool be as sharp as a razor, makes the incision a tear rather than a clean cut. It is possible that the tool may be changed in shape slightly and do the work, but in its present shape it is not as good as the *machete*. Speaking of the fiber in the outer bark of the *Castilloa*, the natives used formerly, when they found a very large tree, to pound the bark until it was loose, then cut it off and dry it, and have a beautiful snow white sleeping mat, as soft as wool, and looking for all the world as if it were the product of a loom.

Here I must mention a rubber tapping tool invented by a native Panamanian whom I met, and who is not only a rubber gatherer but a thinker. Although so many men have tried to evolve a satisfactory tapping device for rubber trees, it is singular that the thought of a would be inventor in this line, almost invariably, turns first to some sort of vacuum or suction arrangement, that will not only act as a tapping tool, but pump the *latex* out of the tree. Of course a little study of the formation of the lactiferous tubes makes it evident that nothing of this sort is feasible. The suggestion, however, has come from a great variety of sources, and in some cases from scientific men. So it was interesting to run across the same mental processes and the same sort of deduction among the natives of the rubber countries. The illustration here given shows an instrument designed and made by the native referred to, a man named Wancho, who is shown in another illustration standing

in a grove of *Castilloa*. The instrument consists of a cylinder of light balsa wood wound with codline, through which runs a piston made of hard wood, one end tipped with a short iron chisel. The chisel end of the cylinder is fitted with a strip of pure rubber, a packing to be drawn tightly around the tree. The puncture made and the piston withdrawn, the hope was that the cylinder would fill with *latex*. That expectation, however, was blasted, as only the usual amount of *latex* followed the cut.

Two of the long trips across country brought us out at the *llanos*, or grass plains—prairies containing some 25,000 acres, on which grazed some 150 head of cattle of the old Spanish strain, but big and fat for all of that. They were not at all wild, yet to milk a cow it was necessary to muzzle her calf and tie it to her front legs and she then seemed to feel that her offspring was getting the *leche* that really flowed into a *calabash*. In a little oasis of trees in this prairie of rich short grass, was a neat native house in which lived the keeper of the herd and his wife. Thin, almost to emaciation, was Don Raimon, gray haired, with the sparse beard of the true Indian, clad in white; he was the only energetic native that I saw on the peninsula. Donna Maria, his spouse, short, fat, and comely, in calico dress and blouse, barefooted, with a man's hat on her head, her own pipe in mouth, surrounded by hens and dogs, she cooked in a placid way that was most picturesque and restful. We slept at their house one night, but on the second visit signalled the schooner and went aboard to sleep, away from the various insects that always infest a cattle ranch.

It was during a visit to the *llanos* that we nearly lost the Prospector. It came about this way: From the time of the Spaniards the country has been known as a gold producer. Indeed,



NATIVE RUBBER CUTTER WITH MACHETE AND CALABASH.



every brook and river showed traces of "color," while traditions of lost mines and their fabulous riches were everywhere rife. As we were not after gold, but rubber, the lost mines, or the sunken treasure ship at the mouth of the Marieto, troubled us not at all. That is, not until the Miner came across the mountains and rode into our camp with a true Western yell. He was a raw boned, good humored, shrewd, Irish-American, who had been in every mining camp in North America and who was now developing the Gallo (Golden Cock) mine. He and the Prospector got together at once and the air full of "andesite," "quartz," and "porphyry." Then they got whispering and later parted. It was at the *llanos* that it all came to a head, for it was there that the Prospector began furtively to study a small diagram, and later stole away accompanied by an Indian whom he had hypnotized by the gift of a *real*. They took a bee line for the shore, forded the Marieto, and, on a little island that is half covered by the tide, hunted up a certain tree, strode away so many paces by compass, and started to dig.

It was exciting to see how eagerly they plied pick and shovel, and how they started with joy when the pick struck a tree root. And they dug and dug until they suddenly awoke to the fact that they were cut off from the main land by the tide. Then the Indian went all to pieces and wept and called upon the saints, while the Prospector uttered words unfit for publication. There was no danger unless an alligator or a jaguar got them, and as there was no boat the best thing would have been to wait for the ebb. Instead of that, they went further into the thicket and a few minutes later appeared each with a pole, and stepping into the swiftly running water started to cross. Very slowly, bracing themselves at every step, they waded, the water up to their breasts, and finally emerged into the shallows and were ashore. Neither of them went back, and thus ended our only treasure hunt.

The "gusano del monte," or grub fly, was quite in evidence at the *llanos*. I got three, the Scout seven, and the rest their share—just how many I have forgotten. But I have not forgotten the sharp twinge, like a red hot needle, that tells of the presence of the grub in one's flesh, or the killing of it with nicotine, the heating of the spot by a firebrand, and then the desperate squeeze that shoots the inch long intruder out into the open.

I also learned here why it was that so many of the natives have sore feet, about half of our men being then laid off. A disease which they call the "massamora," something like chilblains, attacks them, the cause being a minute insect that is found in stagnant water or decaying vegetation. Unless cared for, the feet swell dreadfully and the skin cracks and festers, making most troublesome sores.

One of the worst rains came on while we were at *llanos*, but all were under cover—that is, all except the Prospector and the Scout, who came in drenched and cross because the rest were dry and feasting on mangos and bananas. While it rained Donna Maria was approached with the proposal that she get the Indian woman who lived near to do some washing. She got the woman to come over, but as it was a "fiesta" (St. Peter's day) she had religious scruples against working. Nor could she work the next day, she explained, as that was the fiesta of St. Paul. All of which was solemnly repeated by Elias Oho. I have not mentioned him before, but he deserves it. He was a boy about 14, hunchbacked, withered, with enormous black eyes, and treated by all the natives as a most distinguished guest, his condition being due to the fact that when he was young "a witch looked at him." Looking at him in turn one wondered what result that look had upon the witch.

What with heavy rains that made the trails bad and the rivers impassable for a half day at a time, the laziness of the natives, and their habit of disappearing to attend far away fiestas, not to speak of the way the mules had of hiding in the brush when they were most needed, we were not getting ahead as fast as could be wished. So the Prospector and the Miner, with Wancho, the best woodsman on the peninsula, took the schooner to the Quebro to arrange for trail cutters, or, better still, canoes and men to take us up that unknown river. In the meantime the rest of us went on with the work of exploration. A few days later the Quebro expedition returned and reported no canoes, no men, and no chance of getting through until the dry season, as the rains were far worse than where we were.

It was during the absence of the party named, however, that the rest of us went far up in the mountain valleys where no white man, even in the time of the Spaniards, had been, and preëmpting an old rubber cutter's shack, established ourselves in Camp Iguana. We were able to make the journey most of the way on mule back as an ancient Indian trail passed close to it. The barometer read 1000 feet elevation, but the *Castilloa* was just as plentiful as on the lower lands, and indeed, here were the largest trees. I found also a species of *Ficus* that produced a very good quality of rubber, but was not plentiful enough to have commercial value.

Our party consisted of the Pioneer, the Scout, the Comodore, the writer, three Indians, with one pack mule, besides those we rode. As there was no feed the mules were sent back to Rio Negro as soon as they were relieved of their burdens. The ride to Iguana, although rough in places, was delightful.

[TO BE CONTINUED.]



CATTLE RANCH AT THE LLANOS.  
[Don Raimon in the Foreground.]



SUGAR MILL NEAR LAS MINAS  
[On La. Margaritas Plantation.]



## THE EXTINCTION OF AFRICAN RUBBERS.\*

TO THE EDITOR OF THE INDIA RUBBER WORLD: In answer to your request for my experience in connection with rubber in Africa, and my opinion in regard to the future of its production, I have pleasure in submitting the following notes:

A part of the continent I know very well is the German colony of Kamerun, on the west coast, where I have been interested as a merchant for 23 years, and more recently in cocoa and other plantations on a large scale. When I first went there rubber was not known to exist in the country. In the year 1884 I found *lianes* (creepers) of *Landolphia* growing abundantly on the Kamerun mountain. I taught the natives how to collect the juice and to prepare the raw rubber, taking much pains to explain that they must not take too much from each *liane*, as otherwise these would die.

The people soon found that rubber collecting was a good business, and the whole population went to "the bush." When a party came to a place where some of the precious *lianes* were growing a camp was made, and the collecting was performed in this way: Armed with cutlasses, some men climbed up in the trees where the *lianes* were hanging, cut these in pieces, and threw them down. Then the pieces were laid on low stands and the bark was chafed all over in order to get out as much as possible of the thick juice. When all the *lianes* had been treated in that way, the collecting party left the place to look for more. When I remonstrated against the destruction of the *lianes* they answered it was of no use to leave anything behind, as it would be taken away by whoever next came to the place after them.

In this way all the rubber *lianes* on Kamerun mountain were finished within three years. From here the search for rubber spread over the whole colony, and rubber was found almost all over the thick forest that covers the country, from the sea-coast up to the grass lands of the interior. Different species of *Landolphia* were found, and also a large tree, giving just as good rubber, was growing in several parts of the country. Professor Paul Preuss, then as now director of the colonial botanical garden at Victoria, found that it was a species unknown to science and called it the *Kickxia elastica*.

The rubber collecting went further and further into the country, and was to the rubber producing trees and *lianes* the same as the forest fire is to the pine trees in the north. Both leave death and destruction behind, and are kept up only by moving on into new territories. In the most places the fire has already ceased from want of fuel, but in the remotest parts of the dense forest it is still smoldering—waiting for a gust of the "trade" wind to hasten on the destruction.

The same has been the course in all other parts of Africa where rubber has been found. The statistics prove it. In Lagos, where *Kickxia* was found in great abundance, the destruction of the rubber trees was much quicker than in Kamerun, due to the fact that the former country is more thickly populated and has better communications than Kamerun. The Con-

go Free State has the widest rubber producing areas in Africa, and most likely the rubber will last longer there than in any other part of the continent, in spite of the energetic efforts that are made to finish it as soon as possible.

In fifteen years more the rubber export from Africa will be of no consequence to the market. By that time all parts of the rubber producing forests will be gone through by the collectors, and the export will reach its minimum, at which rate it probably will keep on for several years. The export will not stop altogether, as some of the *Landolphia* and *Kickxia* plants that are too young to give rubber at the time of the first collection will in the course of time grow up and give rubber. Also many of the *lianes* that were cut off have not died, but pushed out new shoots and are growing out again. But any great increase in the export from this source is not to be expected, as very likely most of the new trees also will be destroyed at the first tapping.

The best protection to the rubber producing trees would be to give each an owner. This could be done by partitioning the forest area surrounding each village between the families in the village. Thus every native would feel a personal interest in the preservation of the rubber supply, whereas, where the rubber is common to all, the first thought of every collector is to get as much rubber as possible *now*, feeling that anything left for the future would be speedily wasted by some one else. This plan is said to have been adopted by the natives themselves in parts of the French colony Gaboon. It has also been done in one place on the Kamerun mountain, and not long ago I spoke with some men from that place. They told me how many rubber *lianes* each of them had, how big they were, and how long they still would have to wait before they could begin to tap the rubber. They used regularly to inspect the *lianes* to see that nothing happened to them. They laughed at the idea that anybody else would go and tap the rubber. The thief would always be detected, and as all people know that, and that a hard punishment would follow, the rubber plants are considered safe.

Perhaps to carry out this scheme would in many places not be possible, and even if it were, it would increase very little the rubber export. The only way to do this is to plant rubber trees on a great scale. That the natives will be inclined to engage in farming by which they have to wait ten years for a return, is not to be expected. At least it will be necessary that the white people show them a good example, as has been made in the planting of cocoa. Rubber farming is practicable only for the capitalists, who have money enough to wait for the returns.

That practically nothing has been made in rubber culture in Africa thus far is due to the bad result of experiments made with some American rubber trees. In 1889 I purchased seeds of the rapidly growing *Manihot Glaziovii*, which grows in the Brazilian province of Ceará. A little later nearly all the cocoa farms in Kamerun grew the *Manihot* as shade trees. They were planted on all kinds of ground and in different climates, from the Bonge country with its laterit ground and comparatively dry climate, to Debundja and Bibundi, with its black fertile soil and 11,000 millimeters [=433 inches] of rainfall yearly. In all places they grew well and quickly, but did not give any rubber. The same experience, I hear, has been made with *Manihot* in Java and India. Some years ago *Castilleja elastica* was also planted in Kamerun, and the result can soon be reported.

\*The author of this contribution, a native of Sweden, is a member of the commercial firm Linder & Co., composed of capitalists from Stockholm and Hamburg, trading in Kamerun. Among their interests is the "Debundja" cocoa and coffee plantation, or a concession of lands in the Atlantic belt. Our author was a pioneer in Kamerun, having been the first white man ever seen in many of the native villages. He was the first to engage in rubber trading, and his conclusions in regard to present and prospective rubber conditions may be accepted as coming from an exceptionally well-informed observer. (E. S. F. R.)

It has taken much work to protect this tree against the many enemies it seems to have in Kamerun, for which reason it is doubtful if this tree can be an object for farming on a large scale in Kamerun, even if it should give a satisfactory amount of rubber.

Considering that the trees with which those experiments were made are quite strangers to Africa, it is no wonder that the result was not good. As we now have such a splendid tree as the *Kickxia elastica*, growing wild in the country, this ought first of all be selected for planting. On many farms in Kamerun the *Kickxia* is now planted as a shade tree, and has shown itself hardy and fairly quick growing. If the planted trees turn out to give as much rubber as in a wild condition, a better rubber tree for cultivation in West Africa cannot be found. We expect to be able to begin to tap them when they are eight years old. A wild growing *Kickxia* of ordinary size gives, without injury to its growth, one kilogram [=2.2 pounds] of rubber yearly.

It is high time that the colonies in Africa by extensive farming replace the destroyed rubber trees; otherwise there will in a few years be no African rubber to meet the ever increasing demand. Very likely the Germans in Kamerun will take the lead in this, as they have done in the cacao farming.

G. WALDAU.

December, 1904.

### THE TROUBLE WITH AFRICAN RUBBERS.

TO THE EDITOR OF THE INDIA RUBBER WORLD: I noticed in the October 1 issue of THE INDIA RUBBER WORLD a letter from Mr. A. D. Thornton, of the Canadian Rubber Co. upon the subject of the deterioration of African rubbers; I also notice another letter in the December 1 issue from the same gentleman, and upon careful consideration I feel that it might be of some interest to the trade to give my own views upon this matter.

I cannot agree with all that Mr. Thornton says about the deterioration of African rubbers, because it has been my observation and experience that these rubbers do not of necessity deteriorate because of improper handling in their preparation, because I have noticed this in all of the Upper Congo rubbers, such as Ikelemba, "tresses," and Aruwimi, and I find that they become sticky and have the appearance of being heated on exposure to heat and light, and I have, therefore, arrived at the conclusion that this was caused by the presence of resins in the rubber. I have proved this to be true, at least to my own satisfaction, and I think I can demonstrate it to any one interested that this was the case.

Of course, every one connected with the rubber trade knows that African rubbers do contain a much larger percentage of resins than the South American rubbers, and it is, I believe, also a well known fact that rubbers which contain a large percentage of resins must be handled in a different manner from those that do not contain so much; and this is the reason, I believe, that Mr. Thornton has had the trouble which he has experienced with African rubbers.

It has been my invariable custom to treat rubbers which show that they contain an excessive amount of resins in an entirely different manner than those that do not contain so much resin, and I have never experienced any difficulty with them as yet. To the subject of resin and resinous matters in rubbers I have given a good deal of thought, and I have arrived at the conclusion that this is what gives our rubber manufacturers much of the difficulty which they experience in the factory with their formulas, and this also has forced me to the conclusion that there is no hard and fixed rule for handling rubbers. I have

found this trouble in the case of South American rubbers, but not to as great an extent as will be found in the Africans. I have also arrived at the conclusion that this resin is the cause of deterioration of rubber goods to a large extent after they have been vulcanized, and this can only be overcome by rubber manufacturers treating each of the various kinds of rubber as an individual lot, and not treating the various lots collectively.

If this information is of any value to the trade, they are welcome to have it, because I believe in being broad minded enough to be willing to "help the other fellow" with his troubles, and I believe that if this policy was carried out to a greater extent in the trade, we would all get better results and profit by each others' experiences.

WILMER DUNBAR,

Factory Manager Pennsylvania Rubber Co.

Jeannette, Pennsylvania, December 7, 1904.

### A CONGO RUBBER AND MINING COMPANY.

THE report of the Cie. du Katanga for the fiscal year 1903-04, while showing that their trading is still confined to Caoutchouc and ivory, indicates that active work has been done in the study of the mineral resources of its concession, and planning improved means of transportation. If the territory—in the southwest of the Congo Free State—should prove as rich in gold, copper, and tin as is now supposed, an important source of wealth will exist after the rubber has become exhausted. An attempt is being made, however, to provide for a continued supply of rubber by forming plantations. The profits of the company were smaller than in some former years; the output of rubber was only 85,852 kilograms, with 3949 kilos of ivory. But, the report says [November 16, 1904], "it is notable that the quality of the exported rubber is far superior to that of the product previously gathered. Katanga rubber is at present quoted at from 10 to 10.60 francs per kilogram—prices which rival those asked for the best grades of rubber gathered in the Congo territory." Reference is made to continued "difficulties raised by some of the native chiefs," the pacification of which has occupied the attention of the company since its formation in 1891. One feature of the report is as follows:

**Plantations.**—In the Lomami section, during the past six months, more than 400,000 seeds of rubber *lianes* have been planted in the nurseries, while 812,000 slips have been set out. The section at present possesses 268,300 small plants, and there are 932,000 saplings on its plantations. The other sections, which are only slightly wooded, are likewise commencing to give their attention to the planting of *lianes*. Nearly a million seeds of the red rubber *liane* of the Kasai district have been introduced into these sections. An agriculturist, having been sent on a special mission, visits the different posts and attends to everything pertaining to the plantations. Besides these plantations, each post has a vegetable garden, and in the mining regions large plantations are being laid out for the purpose of supplying the force occupied in working the mines.

FRED E. OSGOOD and Franklin F. Bradley (No. 706,590) produce a resilient rubber tire, light in weight and that will not be injured by punctures, by filling it with a sponge-like core. The process of manufacture consists in enclosing within an outer covering a core of less bulk than the space within the covering, and composed of a mixture of an expansible material and a chemical capable of generating gas when heated, and heating said mixture to generate a gas and permanently expand the core to completely fill the space within the outer covering. Hitherto tires have been made in which a core of sponge rubber has been surrounded by a rubber tube. By this method the rubber sponge and the tire proper are made in one operation.



## ADVERTISING IN THE AMAZON COUNTRY.

HOWEVER foreign to American and European ways life on the Amazon may be, it does not follow that the collection of rubber there is carried on entirely in haphazard fashion. If it were, the maintenance of a yearly output of 30,000 tons of rubber through the port of Pará would be out of the question; the fleet of steamers on the Amazon would be without an assured patronage; and the large commercial houses of Pará and Manaus would at all times be in a position of uncertainty. These considerations are suggested by a glance over the advertisements appearing in late Pará daily newspapers, which would indicate that at least some kind of methods are observed in the conduct of the rubber business, and that these are generally recognized by the public; otherwise such advertisements as appear below (after translation) would have no meaning to the newspaper readers:

### SERINGAES.

THERE will be sold about 600 estradas of seringueiras situated on the Laguna river, above Tajapuru and the Preta river, all within the municipality of Melgaço (in the district of Breves); fertile, healthful, and very pleasant. Communicate with Messrs. Thome de Vilhena & Co., here, and with the undersigned at Laguna.

Pará, October 1, 1904.

MAXIMINO NOBRE DE ALMEIDA.

### HELP FOR SERINGAL.

HELP required for work on rubber on the Acre. Hotel Universal, room No. 6, from 10 to 11 A. M., and from 4 to 5 o'clock, P. M.

### SERINGAL ON THE ACRE.

RODRIGUES DE SOUZA, broker, is authorized to sell the rubber plantation "Amelia," on the Acre river, the last crop of which amounted to 45,000 kilos of rubber, and which is of sufficient size to produce double the amount, new estradas being opened and worked. He will receive proposals at his office in the alley São Matheu 8.

Such advertisements refer to rubber lands which have been systematically laid out, and the rights to which are transferable, as property is in other countries. *Seringal* (plural *seringaes*) is the name applied to such an establishment; *estradas* are the paths cut through the forests to connect the trees assigned to each rubber worker; and *seringueiras* are the trees.

## THE MERITS OF "POZELINA."

UNDER the heading "Great Discovery of the Century" the Pará daily journal *Folha do Norte*, of November 14 last, contained an advertisement of a preparation designed for use in rubber gathering, which the vendor calls "Pozelina." The merits claimed for the article are indicated in a portion of the advertisement which we translate as follows:

Rubber gatherers will find in this preparation a good means of preserving the *latex* in a fluid condition until the time of curing, and whether it has been collected one day or many days, the rubber produced will be of a superior quality. The preservation of *latex* with Pozelina renders unnecessary the practice of heating it before smoking, which is injurious on account of lessening the consistency and elasticity of the product. The use of Pozelina to keep the *latex* fluid causes it to retain all the desirable qualities.

It further appears from the advertisement that there are yet some scoundrels in the Amazon rubber fields who do not buy Pozelina, but they have their just deserts in being obliged to accept lower prices for their rubber. We continue the translation:

We desire especially to call the attention of rubber gatherers to our preparations, as some still prepare rubber without Pozelina, the only preparation that is recommended by manufacturing works, which later

send us testimonials, saying that they have found that rubber treated with Pozelina is given the preference in the markets, being valued 50 per cent. higher than other makes, which have been treated with substances invented by scoundrels to depreciate the national industry. It is time that the rubber tappers should learn to beware of waters and other liquids which deteriorate the milk, causing it to decompose, and which render the rubber of the very lowest quality, thus causing the foremost of our industries to suffer.

One fails to be impressed with the extent of the business done in Pozelina, since the advertisement mentions that it is sold only at the Drogaria Nazareth (Nazareth drugstore) in Pará. It would be a very exceptional drugstore that could afford enough material of any kind to apply to all the rubber production of the Amazon.

## A WOMAN IN SEARCH OF RUBBER.

THE notable work of exploration which the late Henri Coudreau carried on for a number of years in South America has since been continued, with marked success, by his widow. Beginning in 1895, Monsieur Coudreau was employed by the state of Pará to explore the basins of several little known tributaries of the Amazon with a view to estimating the natural resources, including, of course, rubber. His work was well done, as indicated by the published reports, and it was likewise satisfactory to the Pará government. Upon his death, Mme. Coudreau, who had accompanied her husband on many of his expeditions, asked to be allowed to continue the work, to which the government assented. There have recently been published three volumes, devoted respectively to explorations of the rivers Curua, Mapuera, and Maycura—flowing into the Amazon from the north—made by Mme. Coudreau between November 20, 1900, and January 12, 1903. Besides being a fearless explorer of hitherto unknown regions, this lady is described as being able to make surveys and plot route maps, besides being an expert photographer. New rubber fields have been discovered, and the best means of reaching them pointed out, and altogether the work of Mme. Coudreau has proved so satisfactory that it seems likely to be continued, at the expense of the government.

## THE TRUE HISTORY OF A WESTERN FARM.

IT often happens that the memory of a conspicuously successful man is assailed by the ignorant or prejudiced, and an unworthy motive attached to acts that deserve unqualified praise. Thus in the case of the late James W. Converse, the writer recently heard his great Grand Rapids enterprise characterized as a sharp trade with the Baptist church, followed by a lucky termination. What really happened was as follows:

The Baptist Missionary Society received as a bequest a farm at Grand Rapids, Michigan. Various committees were formed to examine the land and to sell it, but were unable to do anything. Finally Mr. Converse was one of a committee to look the farm over. He thought he saw an opportunity for its future development, which he frankly explained to the society, at the same time offering twice the amount of any previous offer. It was thankfully accepted. He then built a great dam at the river, laid out a town, putting in sewers and water, and began the arduous work of development. He got manufacturers to locate there, often furnishing the money for their enterprises, and finally made much money out of the venture. He did what the society had neither the ability nor the authority to do, nor did sharp trading or luck appear at all. It was simply a broad, generous, business transaction throughout.

## THE INDIA-RUBBER TRADE IN GREAT BRITAIN.

*By Our Regular Correspondent.*

ONCE more the rise in price of raw rubber has put manufacturers under the stern necessity of adjusting quotations to correspond with the altered conditions. Unlike cotton, there are no estimates of the rubber crop to hand, showing figures indicative of a fall of prices in the immediate future. The decision to raise the price of goods was come to with remarkable unanimity in the trade, there being, I understand, only two dissentients who could not bring themselves to see the necessity or advisability of the move. To say that these two are instances of selfishness would be too strong an expression, as it might easily provoke the retort that the action of the majority is by no means based on altruistic principles. All the same it is permissible to express one's regret that complete unanimity could not have prevailed in a case the justice of which in the light of all the facts can surely not be disputed. The rise of 10 per cent. took effect on December 6, and applies to all manufactured goods, with the exception of thread, fine cut sheet, proofing, shoes, and asbestos goods, which, it is stated, are being separately dealt with. If proofing be excepted, it will be seen that the manufacturers of the other exempted goods are but few in number, and no doubt it is a comparatively easy thing for them to effect a combination for the purpose of regulating prices. Such a combination has long been in existence as regards elastic thread; with regard to the other classes of goods I am not at the moment in possession of any details, but it is evident that some sort of combination has been effected or is imminent? Of course in this matter, with a 10 per cent. rise agreed to by British manufacturers, foreign firms with houses in London find themselves in a strong position. They can either follow the lead of the British, in order to maintain a sound condition of business, or they may take advantage of the altered situation to cut in at a less rise than one of 10 per cent. The particular condition of the trade in the particular country represented will of course largely determine which procedure is to be adopted, though to judge by the pessimistic tone of the continental trade generally, it would certainly seem advisable for the foreign agencies to fall in line with the British manufacturers.

THIS company, whose works are situated in Gibbon street, Bradford, Manchester, stands in rather a curious position with regard to its competitors in the rubber manufacturing trade. A year or two ago the company failed, after an active existence of many years. The principal creditors were firms who had supplied raw material, and it was decided among them, on the representation of a firm of raw rubber brokers who were the principal creditors, that the concern should continue to be worked for the benefit of the creditors. This has since been done, Mr. Middleton, a Manchester accountant, being the practical head of affairs. Under the new régime the company seems to have done well, and apparently as long as they can keep going the shareholders do not agitate for dividends. Of course I am not suggesting that everything is not fair and square in the present state of affairs, but from sundry grumbles which I have heard it would seem that approval of the course pursued is not general among the firm's competitors. It is argued that the non-necessity for the payment of a dividend puts the firm in an advantageous position in quoting for rubber goods. Whether

this is so or not I cannot speak from inside knowledge, but I might suggest that the firm has a more decided advantage in being largely in the secrets of the rubber market by reason of its present constitution.

So far as the rubber card is concerned, the manufacturers are grumbling a good deal at the high price of rubber. There is not that unanimity in this particular trade which is necessary to obtain a rise in price, so the consumers have not been troubled by the receipt of notifications of advance. Of course the price of rubber is all in favor of the progress of the cement card, which contains no rubber. I am probably not far from the truth in saying that that two-thirds of the output of card cloths to-day are of the cement variety. These are cheaper than the rubber cards, and for general purposes answer their requirements. In certain cases, however, the rubber card is still a necessity, and as far as one can judge its manufacture will continue to be carried on, whatever the price of rubber. As a sort of side issue of this manufacture it may be mentioned that the recovery of naphtha from the spreading machines is much more largely practised than in the case of the waterproof trade. The recovery plant is in regular use in all the works where it has been established, an average recovery of 80 per cent. of the solvent used being effected, a figure which must be considered very satisfactory. With regard to regular rubber works, the decline in importance of the rubber waterproof trade has caused naphtha recovery schemes to be left in abeyance.

As an appendix to the last topic a word or two with regard to the solvent naphtha market may be added. As practically

PRICE OF  
NAPHTHA.

the rubber works are the only customers of the tar distillers for this product, it is not surprising that the latter are rather upset by the state of the water-

proof trade, which has caused such a serious diminution in the demand for naphtha. In the ordinary course of tar works procedure, where crude naphtha is distilled for a variety of products, a certain amount of solvent naphtha is of necessity produced, and has to be sold at the best price obtainable. From 1s. 2d. to 1s. 4d. per gallon was the price about a decade ago, whereas to-day naphtha of similar quality can be bought for less than half these figures. The ordinary specification is for 90 per cent. of distillate at 160° C., though some rubber firms have a special specification to which they require rigid adherence on the part of the tar distiller. I think myself that too much importance is often attached to distillation figures; the temperature at which the last 2 or 3 c.c. come over, is in my opinion, an important point which the ordinary specification rather ignores. The figures obtained serve, of course, an indication of the presence or absence of heavy oil which is so undesirable in the majority of uses to which the naphtha is put. The use of shale spirit is almost completely confined to Edinburgh, which is in the immediate neighborhood of the chief shale distillation works. The penetrating smell of this spirit betrays its use at once. I was once asked by a Scotch waterproofer how I knew that he used shale spirit instead of ordinary solvent; my reply, of course, was that I smelt it some time before I arrived at the works. The smell is certainly a penetrating and to most people a disagreeable one, but barring this there seems nothing to be said nowadays against the product, as it is regularly supplied free from the heavy oil it used to so generally contain.

RISE IN  
MANUFACTURED  
GOODS.

CARD CLOTH  
MANUFACTURE.

BROADHURST  
& CO., LTD.



OUR London contemporary in a recent innovation—the publication of replies to technical queries—strikes an important note with regard to the growing custom of analyzing rubber goods. I quite agree that it is possible for far too much importance to be attached to analytical figures, and all the more is this so when the analyst's knowledge of the subject is derived entirely from the text-book on the subject which has recently been published. This sentence must not be taken as reflecting at all upon the book, or the methods it contains; my stricture is concerned entirely with the way the book is used. From what has reached me from various masters of the trade, I gather that novices in rubber analysis have jumped to the conclusion that with the possession of this volume they are in a safe position—as safe in fact as those assayers who rigidly adhere to the proved methods detailed in their text books. It is safe to say that no such finality has yet been attained with regard to a great part of rubber analysis, therefore the analyst who is unable to supplement his figures with deductions derived from a knowledge of the trade, is liable to come to erroneous conclusions, and conclusions, moreover, which may have serious consequences for the rubber manufacturer. Apart from the academic question of correctness or otherwise in scientific method, it is a grievance of the trade that people buy very cheap goods and then report that they don't contain sufficient Pará rubber. It is suggested that only goods of a certain grade or price should be expected to pass the fiery ordeal of analysis. This seems only fair and reasonable, if it were generally acted upon. Of course it is entirely in the hands of the rubber manufacturer to stipulate as to whether he sells upon analysis or not, but in the present stress of competition it is not always easy for one firm to decide on a course which may put it at a disadvantage with its fellows. In saying what I have done about chemical analysis I have the best of reasons to approve of its use; it is only against its misuse that I enter a protestation. Since writing the above I have read the following sentence in a paper by G. Fendler in the *Gummi-Zeitung*: "Chemical analysis of rubber alone is not sufficient, but should go hand in hand with technical valuation, as the conditions resemble those in the valuation of wine, which cannot be determined by mere analysis." This sentence, I think, might with advantage be inwardly digested by those concerned who have shown such a disposition of late to pin their faith solely to analytical data.

THE volume on "The Cultivation and Preparation of Pará Rubber" by W. H. Johnson, F.L.S., is one that, in the light of our Editor's recent experience in Ceylon, can be more profitably reviewed by him than by myself. Judging from the introductory chapter it would seem that however great are the author's claims to be considered an authority on rubber plantation work in Ceylon, the Straits Settlements, and West Africa, he requires a good deal of prompting when he gets into the province of the rubber manufacturer. Novelists who introduce technical subjects into their manuscript are getting more and more into the habit of asking experts to correct their proofs. If this course had been followed by our author, it would not have gone out to the world that it was not until 1874 (which he gives as the date of the discovery of vulcanization) that the rubber trade began to make substantial progress. It seems to be somewhat of a moot point whether the high prices so far realized for Ceylon plantation Pará are in excess of the natural product, only so far as the content of moisture is less. The question as to the actual quality of the rubber when washed and sheeted does not seem to have been conclusively answered. Apart from this point it

is important to note—if what a Ceylon planter told me is strictly accurate—that the plantation rubber could be sold, did necessity arise, at a considerably lower price than it now fetches in the market and still leave a substantial profit.

THE severe weather which we experienced in November and which has again set in as I write, will no doubt be welcomed by the rubber boot and shoe dealers. It is a long time since sales commenced so early in the winter, January or February being rather our snowy months.

Though the increase is not all a rapid one, it is noticeable that every year one sees more and more rubber boots about. The general complaint that they are clumsy and draw the feet is still heard on all sides, though the desire of keeping dry and warm in snowy weather, especially in towns where salt is liberally used, has been instrumental in overcoming the prejudices of many former detractors of the rubber boot.

FROM all accounts this industry, which utilizes a considerable amount of rubber in one way or another, is in anything but a prosperous condition. There is a good deal of home as well as foreign competition, and an important point, too, is that most of the big tramway schemes for English towns have now matured and naturally a slump has occurred in this class of work.

The bad report just issued by the British Westinghouse company, of Trafford Park, Manchester, showing a profit of only about £2000, has excited a good deal of comment in our technical journals, mainly because of the flourish of trumpets with which the invasion of Americans and American methods was heralded. The facts seem to be that the works have been laid out on too large a scale and work to keep them going has had to be obtained evidently at prices which show a loss rather than a profit. As far as can be gathered there is no truth in the report which got about to the effect that Dick, Kerr & Co., their principal competitors, were about to obtain a controlling interest in the Westinghouse company; the rumor however has had the result of raising the market value of the Westinghouse shares by about £100,000. In connection with a large tramway equipment contract recently given out in Great Britain, an American firm quoted far below any British competitor, so it would seem as if American methods worked all right on American soil, but not so successfully when their environment is changed.

A REMARK in the November issue of THE INDIA RUBBER WORLD that interest in this body has not died out in the country of its production is much to the point. Producers and consuls are always ready to testify to the amount which is available. The question arises, however, who are the prospective purchasers. To the best of my knowledge those rubber manufacturers who were induced to give it a trial on a more or less extended scale found nothing in it to recommend a further purchase; moreover, since the advent of Pontianak gum in bulk there is even less reason to suppose that there will be any rush to buy Almeidaína or "potato rubber," as it was generally termed in England, owing to its physical appearance. I note in Mr. Pearson's book that it is stated on the authority of Thomas Christy that the pungent vapor given off from this body when heated has no poisonous effect. Mr. Christy was the principal importer of this to London about twenty years ago, and no doubt this expression of opinion was the result of complaints made to him by rubber manufacturers to whom he had sold the gum. Though I never could find out the nature of the alleged poison there is every reason to suppose that the serious complaints made by the rubber workmen were justified and were not the outcome of imagination.

ANALYSIS  
AT NAUSEAM.

THE  
WEATHER.

THE ELECTRIC  
ENGINEERING  
INDUSTRY.

NEW BOOK  
ON RUBBER.

ALMEIDINA  
GUM.

## AFFAIRS OF THE DUNLOP TIRE COMPANY.

**A**T the eighth annual general meeting of shareholders in the Dunlop Pneumatic Tyre Co., Limited (London, November 25), Chairman Harvey Du Cros reviewed at length the company's history, present status, and prospects. The company had been formed to work a monopoly—a legitimate monopoly—under patents granted by the Crown and certified by high authority to be valid. The patents, indeed, had been sustained throughout their life, but the company had not been able to protect itself from infringements; there had been continual litigation, at great expense, which had not always resulted in the company's favor. Hence the expected monopoly had not been realized, so that, with respect to the large item of "good will" figuring as an asset, the company had proved to be largely over capitalized. Various measures had been proposed for the reorganization of the company, but none of these had met the sanction of the shareholders.

But the directors, early in the history of the company, foreseeing certain probable results, had adopted the policy of withholding large sums from the company's earnings instead of making the greatest possible distribution in dividends. During the first 18 months the company earned nearly £1,000,000, and enough had been earned every year to pay dividends upon the capital. But had all the earnings been paid out as dividends, the business must have come to an end upon the expiration of the patents, in 1904. Indeed, before such expiration, the company had found itself practically in the position of having no patents. Under a late judicial decision A could make one portion of their patented tire, and B could make a second portion, and neither would be an infringer; they could sell to third parties, who could assemble the parts, and thus evade prosecution by the Dunlop company, whose patents covered a combination of these elements.

The directors, however, had worked with a view to continuing in business, rather than making the largest possible distribution of dividends from each year's profits. At first the company had been in the position of middlemen—that is, buying goods from rubber mills and reselling them. The policy of retaining the earnings of the company to a very large extent had enabled them, through the formation of subsidiary companies, to become a manufacturing corporation, in a position to meet and resist competition, at home or from abroad. The chairman asserted that the company was now equipped with the largest and best plants in its particular field in the world. Through liberal writing off for depreciation of the manufacturing plants these now had a very low book value as compared with their actual worth, and he considered that the directors had achieved a great commercial success in creating a manufacturing business out of the earnings of the company.

The business of the company had been largely identified with the bicycle trade, which in late years had been passing through a crisis. He believed that the limit of depression had now been reached, and that an established trade in bicycle tires could be expected. In any event, the Dunlop company were in a position to get their share of the bicycle trade so long as any existed, but they had also large hopes in respect of the motor trade, which was rapidly developing in Great Britain. During the fiscal year ending September 30, the company manufactured 1,556,220 tires, which was a larger number than they had ever manufactured before, and larger, they believed, than had been manufactured by any other company. On ac-

count of the general reduction in prices, however, the year's turnover in tires had realized £83,000 less than the same product would have yielded at the prices of the preceding year.

Having reference to the sound financial condition of the subsidiary companies and their established position as rubber manufacturers, the directors felt that the company were on safe grounds as regards the future. Not only was this true in respect of the business at home, but the subsidiary companies in France and Germany—where there had never been any patent protection—had grown steadily, and promised to continue to grow.

The earnings in the preceding year, the chairman said, had been larger than had been anticipated. "I should explain to you," he said, "that the unexpected earnings of last year were due entirely to the extraordinary success that your patent process [the Doughty process] for manufacturing tires has achieved. We always expected it to be successful; but the longer it is in use the greater perfection it seems to achieve." There were reduced profits during the year lately closed, due to the higher cost of rubber and the cut in selling prices, but the benefits of the patent process had been shown in saving the company from a worse showing, and doubtless the chairman's confidence in speaking of the future of the company as manufacturers was based upon their possession of the Doughty patent.

As at present constituted, the capital of the Dunlop Pneumatic Tyre Co., Limited, is as follows:

Preference shares.....	994,900
Ordinary shares.....	994,903
Deferred preference shares.....	1,499,850 3,994,833

The original issue of £1,000,000 in 4 per cent. debentures has been decreased by purchase to £400,700. Ten per cent. dividends have been paid yearly on the preferred shares. The only dividends paid on the deferred preference shares were 10 per cent. in 1896-97 and 5 per cent. in 1897-98. Dividends on the ordinary shares have been as follows:

1896-97.....	8	1900-01.....	5
1897-98.....	8	1901-02.....	5
1898-99.....	0	1902-03.....	6
1899-1900.....	5	1903-04.....	2½

The company carry forward to the new year £241,406, against £235,541 last year. It is pointed out that £109,579, represented by the undivided profits of subsidiary companies, do not figure in this year's accounts, being retained for working capital. The item of good will now appears at £389,071, the reduction of which item was strongly urged in the annual report. The directors asked that the shareholders in the different classes get together and agree upon some form of reduction in the face value of their shares, and then they would approach the courts with a view of having it legalized.

## BRITAIN'S DEPRESSED CYCLE TRADE.

**D**ISCUSSING the British cycle industry *The Financial News* (London) says: "The fortunes of cycle companies are at a low ebb, and though some experts in the trade descry a better time coming, after next year, even they do not expect other than an unpleasant time in the coming year, and the hope of ultimate improvement is based rather upon the disappearance of a few companies in the meantime and the prosecution of rigid and successful economies among the survivors, than upon any prospect of bigger profits in the future."



The history of the past year in the trade has been one of general price cutting, which seems to have been inaugurated by the Swift Cycle Co., Limited. During the year previous to the last, prices were of a uniform and general character. The Swift company, however, not receiving from the public that support which they expected, decided to place upon the market in the middle of the season high grade Coventry-made bicycles at 8 guineas [=about \$41], which was a very heavy reduction. At the annual meeting of the company (Coventry, November 30) Mr. Alfred Du Cros, who presided, said that he thought the company's policy had been justified by the result. The directors believed that the only basis upon which a Coventry cycle manufacturer could continue in business was by reducing the cost of manufacture to a minimum, and by placing the works in such position as would admit of a largely increased output. The company had, therefore, extended their works and acquired another factory near their premises. The Swift Cycle Co., Limited, as *The Financial News* puts it, "was one of the victims of the flotation mania of the middle nineties," and had done so badly that by 1901 reconstruction was necessary, in which the ordinary shares were cut down by 80 per cent.—from £200,000 to £40,000. Comparing the last three years (ending August 30), it appears that trading profits have been well maintained, and that dividends have been paid at the uniform rate of 6½ per cent. on preferred and 10 per cent. on ordinary shares, while a substantial reserve has been maintained.

The company above referred to, however, by no means stands alone. For example, Rudge-Whitworth, Limited, whose cycles have had even greater popularity, have reduced their "Standard" cycle from 10 guineas (representing at that price an appreciable reduction upon previous figures) to £7 15s. [=£37.72]. Rudge-Whitworth, by the way, failed to make a favorable showing in the reports submitted at the annual meeting on October 31, when a fall in profits was shown from £34,310 for 12 months to £7235 for 11 months, the company's year now ending on July 31. The shrinkage of profits, the chairman asserted, "was almost solely due to the state of trade in South Africa." A shareholder at the meeting said that anyone concerned in the cycle trade who had observed the effect of the manufacture of motor cars on cycle companies which had taken up this trade would fully confirm the wisdom which they claim to have displayed in not embarking on either of its branches. Sir Henry Wiggin, Bart., in supporting the report, suggested that cycle manufacture should come together and tried to reach an arrangement to prevent the severe competition and the cutting of each other's throats.

The Premier Cycle Co., Limited, report trading profits of £70,263, compared with £77,126 last year, but the balance, after all deductions, including debenture interest, is only £4453, against £19,275. *The Financial News* says: "This result is vastly better than that of two years ago, when the working produced a deficit of £7000, but it is clear that there must be a complete overhaul of the expenditure to bring it into some relation with the earnings."

Humber, Limited, date from March, 1900, being the result of the amalgamation of two companies which had ceased to be profitable. The capital is £500,000, in equal proportions of ordinary and 6 per cent. cumulative preference shares. It appears that no dividends have ever been paid on the ordinary shares, and that the preference dividend is 18 months in arrears. During the last fiscal year the net profits, available for dividends, amounted only to £1225. The directors, however, continue to manifest a lively confidence in the motor car industry, in which they embarked two years ago, and they apparently

look for a revival in the sale of cycles, as a result of the reduced prices now prevailing.

The New Hudson Cycle Co., Limited, reports net profits for the past three years: £6077 in 1902; £8200 in 1903; £8118 in 1904. Preferred dividends have been paid, and for four years past, 4 per cent. on the ordinary shares. The company has been writing off "good will," and this year set apart £3000 as a nucleus for a general reserve.

The shareholders in the Raglan Cycle and Anti Friction Ball Co., Limited (Coventry, November 14), voted to wipe out £80,000 in "good will" by reducing the £1 shares to 6s. 8d. and to devote £22,000 in reserves and balance of profits to writing off for depreciation and further reducing "good will."

The Raleigh Cycle Co., Limited, reported net profits for the year ending August 13 last of £1501, which amount is carried over. Early in May a heavy cut in bicycle prices had been made by competing companies, but they decided to maintain prices, as the lesser of two evils, and their output had been smaller in consequence. The company hoped to enter the motor industry, with good results.

The following table illustrates the range of market quotations for shares in the preceding named cycle companies, for the past two and a half months—shares being of the par value of 20 shillings, except where otherwise noted:

	Low.		High.	
Dunlop, ordinary.....	5s.	4 1/2 d.	8s.	3 d.
Do. preferred.....	11s.	11 1/2 d.	12s.	3 d.
Do. deferred.....	1s.	3 d.	2s.	0 d.
Humber, ordinary.....	1s.	9 d.	2s.	6 d.
Do. preferred.....	6s.	0 d.	7s.	0 d.
New Hudson, ordinary.....	13s.	9 d.	14s.	6 d.
Do. preferred.....	15s.	9 d.	18s.	0 d.
Premier, ordinary (4s. shares).....		9 d.	1s.	6 d.
Do. preferred (10s. shares).....	4s.	10 1/2 d.	7s.	0 d.
Rudge-Whitworth, ordinary.....	16s.	6 d.	22s.	9 d.
Do. preferred.....	4s.	6 d.	5s.	0 d.
Swift, ordinary.....	16s.	6 d.	18s.	0 d.
Do. preferred.....	14s.	3 d.	14s.	6 d.

#### THE STANLEY CYCLE SHOW.

LONDON has had only one great cycle show this winter, instead of two, as in former years. The twenty-eighth annual Stanley show was held November 18-26, at the Agricultural Hall, Islington. More than usual importance was attached to this show for the reason that the National Cycle Show—which hitherto was held at the Crystal Palace—has amalgamated with the Islington show, the control being entirely with the Stanley officials. One result was that a largely increased number of exhibitors applied for space, including many whose exhibits had been made in the past only at the National show.

The Stanley this year was still essentially a cycle show, though in each year, beginning in 1899, it has been representative of the advance in motor construction. More exhibitors of motors were represented this year than in any former year and a greater variety of cars were shown. The display in this respect doubtless would have been larger, but for an understanding between the management and the proprietors of another exhibition to restrict the number of motor cars.

The chief new feature of the Stanley show was the number of "tri-cars" exhibited, and the improvements which have been made in their design, finish, and control. The tri-car is a kind of hybrid which has a position between the motorcycle and the small car. It is three wheeled, steering with two wheels in front, and the single rear wheel taking the drive of the engine. The driver sits over the back portion of the machine, while the passenger is seated in a well-sprung basket between the front wheels. This type of motor has advanced

greatly in public favor during two years past, and has become a serious rival of the small car of 6 HP. or thereabouts. Some such machine shown weighed complete about 460 to 480 pounds, and were priced at £130 [= \$650].

Hardly any changes were seen in pedal cycles. Alterations as regards motorcycles have mainly been directed toward the reduction of weight, in some instances the weight-cutting tending toward insecurity.

The number of rubber firms exhibiting was larger than for many years past, one reason for which is to be found in the increasing number of concerns making tires of the type protected formerly by the Dunlop (Welch) and Bartlett patents. The principles involved in these types were represented in almost every tire display in the show. The principal exhibitors of tires, and some of the exhibitors of tire accessories, named in alphabetical order, were as follows:

The Avon India-Rubber Co., Limited (Melksham).—Motor and cycle tires; Lovelace non slipping treads a specialty.

W. & A. Bates, Limited (St. Mary's, Leicester).—Beaded edge and wired on tires; repair accessories.

Bavarian Rubber and Asbestos Works (Munich, Germany).—"Metzeler" wired on and beaded edge tires, now introduced into Great Britain for the first time.

The Black Pneumatic Tyre Co., Limited (Glasgow).—"Clydesdale" and "Waverley" tires; the former made with Moseley's "flexifort" fabric.

Capon Heaton & Co., Limited (Stirchley, near Birmingham).—Beaded and wired on tires, including the Fleuss tubeless; pedal rubbers, cushion tires, etc.

Clifton Rubber Co., Limited (Birmingham).—"Wapshare" and "Clifton" tires, manufactured, under license, by the Doughty process; "Clifton" detachable inner tube.

Continental Caoutchouc and Guttapercha Co. (London, and Hanover, Germany).—Beaded edge and wired on tires for motors and cycles; cycle accessories, sporting articles, and mechanical rubber goods.

Dunlop Pneumatic Tyre Co., Limited (London).—Regular types of Dunlop tires, vulcanized by the Doughty patent process; inner tubes, repair outfits, and waterproof garments from the company's Birmingham factories.

Edlin Sinclair Tyre Co., Limited.—"In Equilibrio" wired on and beaded edge tires.

Hanover Rubber Co., Limited (Hanover, Germany).—Tires for cycles and motors; "Gloria" rubber belting for motorcycles; mechanical rubber goods.

J. E. Hopkinson & Co., Limited (West Drayton).—Hopkinson patent solid tire for motors; wired on and beaded edge pneumatic tires.

Hubbard's Patents and Tyre Syndicate.—"Constrictor" tires.

Imperial Tyre and Rubber Co., Limited (London).—Tires for motors, cycles, and motorcycles, with non skidding bands.

Le Paris Tyre Co., Limited (London).—"Le Paris" and "Cuirasse" tires, made of special fabrics; detachable leather non skidding device for motor tires.

London and Manchester Rubber Co.—"Hammond" patent easy-fitting tire.

Charles Macintosh & Co., Limited (Manchester).—Motor, cycle, and motorcycle tires, under the firm's own brands, and also the brands of large customers, as "Humber," etc.; also rubber solution and repair outfits.

Midland Rubber Co., Limited (Birmingham).—Beaded edge and wired on tires, vulcanized, under license, by the Doughty process; inner tubes, repair outfits.

Michelin & Co. (Clermont-Ferrand, France).—Michelin pneu-

matic motor tires, exhibited by M. Wolff, their London agent.

David Moseley & Sons, Limited (Manchester).—Tires for cycles and motors; a specialty was Seddon's motor tire, of which the company are now sole manufacturers.

The North British Rubber Co., Limited (Edinburgh).—"Clincher" tires in four grades.

The Palmer Tyre, Limited (London).—Palmer "Cord" tires for motors, first exhibited at last year's show.

F. Reddaway & Co., Limited (Manchester).—Beaded edge and wired on tires, for cycles and motors; especially the "Camel" brand, with a special rim, and made either with or without inner tubes.

The Reilloc Tyre Co., Limited (London).—A new company; showed a new patented solid tire.

The Self Sealing Air Chamber Co., Limited.—"Hermetic" self sealing tire inner tubes.

Scottish Tyre, Limited (Edinburgh).—Beaded edge and wired on tires, made with "flexifort" fabric, and vulcanized, under license, by the Doughty process.

The South British Trading Co., Limited (London).—Motor tires of The Fisk Rubber Co., Chicopee Falls (Mass.), United States.

Shaw Motor Tyre Tread Co.—Leather detachable band for motor tires.

The Warwick Tyre Co., Limited.—"Warwick" and "Cambridge" tires, wired on and beaded edge.

#### EUROPEAN RUBBER SECRETS.

THE New York *Herald* (December 9) printed a communication signed "Rubber Goods Maker," the pith of which appears in the subjoined paragraphs:

What the rubber industry seeks and has sought for a good many years, is an article or substance which will combine perfectly with and vulcanize at the same point as the natural product, which will tend to preserve the rubber and add to its strength and wearing powers instead of weakening them.

Such a compound is in use in large establishments in Europe, and a company that will discover this secret (a difficult undertaking) and manufacture it in this country as a commodity for sale to the rubber goods makers has several large fortunes in the undertaking.

The foreign made tires, and, in fact, most rubber goods from abroad, are notoriously far superior to those made in this country, and the only reason is that the foreign manufacturers possess the secret of a better compounding material, which secret they probably will not divulge for the benefit of their competitors.

In a later issue of the *Herald* (December 13) a letter signed C. C. King, New York, corroborates the assertions made above. He goes further, and asserts that not only are the rubber goods made in any European country "better than ours," by reason of "the secret materials used," but the European manufacturers use cheaper grades of rubber than their competitors in America. All of which would indicate that Americans have yet a good deal to learn about the rubber industry.

An American rubber manufacturer, writing to THE INDIA RUBBER WORLD in regard to the above mentioned publications, adds: "If you happen to know Mr. C. C. King, ask him if he has ever seen any German make of steam hose working under pressure."

NOT SO GOOD AS IT MIGHT BE.—According to a British weekly paper: "Here is one little fact worth noting in connection with new rubber articles, tires or others. You will observe a whitish deposit, which you generally regard as proof of the superior quality of the substance; as a matter of fact, it is often a sign that the rubber is not so good as it might be."



## SOME POINTS ON SHEET PACKINGS.

BY J. W. C.

IN cleaning up a rubber shop at inventory time, or other occasions more or less perfunctory, it is not an uncommon experience to round-up a lot of odds and ends in the form of "experimental" compounds, and surplus from completed orders, of varying costs and utility, and not infrequently representing a considerable money value. The best of it can be held against possible future orders, but the balance is of concern to the superintendent, for it surely ought to be utilized, and consequently, is consigned to that factory *terra incognita*, the "friction," or is worked up into cheap packing.

No doubt cheap packing has come to stay, in a sense, but it is unfortunate that, in the desire, and perhaps necessity to meet competition, it should frequently be necessary to use materials that to a degree represent a gamble with chance.

This desire to utilize all material that otherwise would be consigned to scrap, is much in evidence in factories where bicycle tires are made in quantity. Here trimmings of frictioned duck and muslins would accumulate, were they not successfully utilized in the manufacture of packings requiring a compact body or base. For this purpose the frictioned material is built into great slabs to a designated thickness and then cut into strips and reinforced on one or both sides by a layer of compounded stock. One enterprising superintendent, being unable to find a market for all this sort of packing, utilized the "friction" in the extensive manufacture of cement—"but that is another story."

Packing has a variety of functions: as applied to piston rods; to render a joint steam tight as in a manhole or handhole, and in pumps and pipe lines. The importance in sheet packings in the rubber manufacturing industry is evidenced by the large number of brands, each manufacturer apparently being ambitious to convince his customers that he alone has "the real thing."

The result is seen in innumerable fetching titles, and the employment of different colors. It is open to question, however, whether the particular color has any great significance in so far as quality is concerned, as the permanent popularity of any packing lies in the power of the compound of which it is composed to meet the requirements of its particular use. Thus a very cheap material, reinforced by plies of muslin or duck, as seen in the ordinary C. I. sheet, will answer every reasonable demand when used in low pressure steam lines or cold water joints. But even in this situation complete satisfaction is doubtful if joints are frequently broken, as it has no lasting qualities.

It follows, therefore, that for steam lines, or locations subject to high temperatures, quality and adaptation must be considered. Expansion and contraction are to be reckoned with; hence the packing that retains its elasticity the longest, although the more expensive, will prove the more satisfactory. With few or no exceptions there is no vulcanized sheet packing made that will not in time harden when subjected to continuous steam heat. The term "vulcanized" does not imply a cured packing. In fact, a sheet packing for steam joints, at its best is semi-vulcanized. It should be so compounded and cured as to retain its life, for unless it expands when subjected to heat, its value is questionable.

The experienced engineer, therefore, tests a packing before using it by holding a piece in the flame of a match. If it swells he may feel assured that it possesses at least one valuable quality. He will also see that all iron surfaces to be covered by the packing are perfectly clean, that the packing is cut to a

perfect fit. When the packing is in form of a molded C. I. gasket that the splice is perfectly made; that the bolt holes "justify" exactly with the bolt holes of the joint or head. He will then screw up the bolts when cold, and turn on steam slowly.

These points, though small, perhaps, should be well considered, for live steam is a most insidious thing, and will find a defect if one exists.

The thickness of a pure gum or C. I. packing in a joint is important. It does not follow because a joint has large circumference that packing should be thick. The greater the surface presented to the steam, the more pronounced the action of the heat. When a packing becomes hard the greater is its liability to crack and blow out. It will be found, therefore, where the surfaces to be packed are perfectly smooth, that a packing up to  $\frac{1}{16}$  inch in thickness will meet all requirements. On the other hand, for a rough joint, use  $\frac{1}{8}$  inch, that there may be sufficient packing to fill all inequalities of surface and still make the joint perfect.

## LITERATURE OF INDIA-RUBBER.

CELLULOSE, CELLULOSE PRODUCTS, AND ARTIFICIAL RUBBER. Comprising the Preparation of Cellulose from Wood and Straw; Manufacture of Parchment; Methods of Obtaining Sugar and Alcohol, and Oxalic Acid; Production of Viscose and Viscoid, Nitro-Celluloses, and Cellulose Esters, Artificial Silk, Celluloid, Rubber Substitutes, Oil Rubber, and Factis. By Dr. Joseph Bersch. Authorized translation from the German, by William T. Brant. Philadelphia: Henry Carey Baird & Co., 1904. [Cloth. 8vo. Pp. xxi. 345. Price, \$2.50.]

THIS book is noticed here because of the inclusion of the word "Rubber" in its title, and the high character of the house publishing it, rather than on account of any practical value it may have to the rubber industry. With respect to cellulose products it appears very full and practical, but the subject matter is for the most part foreign to the needs of American rubber manufacturers, whatever may be true in Europe. The 23 pages devoted to "rubber compounds" and "rubber substitutes," may, however, be read with interest by rubber men.

INSULATING MATERIALS IN HIGH TENSION CABLES. BY E. JONA, Chief Electrician of the firm Pirelli & Co. Milan: 1904. [Paper. 12mo. Pp. 45.]

A PAPER read before the International Electrical Congress at St. Louis in September last, and reprinted here in English and Italian. A summary appeared in the issue of this Journal for November 1.

THE COLORADO RUBBER PLANT. BY O. J. KENNEDY, SECRETARY Salida Board of Trade, Salida, Colorado: 1904. [Pamphlet. 8vo. Pp. 16. Price, 1 cent.]

A HISTORY of the discovery of the plant; information as to its culture, growth, and profits.

## IN CURRENT PERIODICALS.

PLANTATIONS de Gutta-percha aux Indes Néerlandaises leurs Résultats. By Dr. P. van Romburgh. [Reprint of a recent official report.] *Revue des Cultures Coloniales*, Paris. XIII-132, 133 (September 5, 20, 1903). Pp. 137-142; 168-173.

Über die neue Guttapercha von Neuguinea [*Palaequium Saffianum*]. By R. Schlechter.—*Der Tropenpflanzer*, Berlin. VII-10 (October, 1903). Pp. 469-471.

Multiplication des *Isonandra* (*Palaequium gutta*). By Charles Rivière.—*Journal d'Agriculture Tropicale*, Paris. III-28 (October 31, 1903). Pp. 291-293.

Gutta perchas from the Straits Settlements. [Analyses and reports on value; extraction of Gutta-percha from the leaves.]—*Bulletin of the Tropical Institute*, London. II-1 (March 31, 1904). Pp. 14-21.

Le Marché de Caoutchouc de Bordeaux. [From *Quinzaine Coloniale*, March 10.]—*Revue des Cultures Coloniales*, Paris. XIV-146 (April 5, 1904). Pp. 202-203.

## RECENT RUBBER PATENTS.

## UNITED STATES OF AMERICA.

ISSUED NOVEMBER 15, 1904.

- N**O. 774,735. Wheel for vehicles [with pneumatic tire]. A. Boguslavsky, London, England.
- 774,790. Pneumatic tire. E. H. Seddon, Brooklands, England.
- 774,848. Nipple or mouthpiece. [The "Cup end" safety nipple for nursing bottles; described in THE INDIA RUBBER WORLD, June 1, 1904—page 311.] C. A. Lindsay, New York city.
- 775,009. Vehicle wheel [having inner and outer hubs, between which elastic cushions or balls are placed.] R. Lancaster and J. H. Lancaster, East Orange, N. J.
- 775,214. Flexible water bottle or pad. W. A. Galloway, Xenia, Ohio.
- 775,272. Vehicle tire [consisting of (1) a core of resilient material, having a longitudinal bore, forming an air cushion and space for the inward expansion of the material when subjected to pressure; and (2) an outer covering of wound wire strands wound spirally around the core in combination with (3) a rim having a spirally grooved channel corresponding to and fitting the strands of the tire to prevent the creeping of the latter]. R. S. Graham, New York city, assignor to W. M. Perkins, Brooklyn, N. Y.

*Design Patent.*

- 37,227. Water bag. A. C. Eggers, assignor to Goodyear's India Rubber Glove Manufacturing Co., both of New York city. *Claim.*—The ornamental design for a water bag, as shown.

*Trade Mark.*

- 43,693. Rubber sponges and brushes. Felix & Willis, Chicago. *Essential feature.*—The word FEATHEREDGE. Used since July 28, 1904.

ISSUED NOVEMBER 22, 1904.

- 775,361. Rubber tire [in sections, connected by a metallic core]. J. F. Byers, Ravenna, Ohio.
- 775,492. Pneumatic tire for vehicle wheels. A. R. Karreman and O. Del Guerra, Chicago.
- 775,753. Vehicle wheel [with elastic tire]. W. B. Keighley, Vineland, N. J.
- 775,824. Pneumatic tire [protected from punctures by a resilient metallic shield]. F. R. Keith, Randolph, Mass.
- 775,841. Cap for air valves for surgical cushions or the like. C. W. Meinecke, assignor to Meinecke & Co., New York city.
- 775,907. Fountain pen. A. B. Leib, assignor of one half to K. A. Chipman, both of Anderson, Ind.

*Trade Mark.*

- 43,741. Rubber tires. Jewell Belting Co., Hartford, Conn. *Essential feature.*—The word GEM. Used since Jan. 1, 1904.

ISSUED NOVEMBER 29, 1904.

- 775,989. Exercising apparatus. J. L. Roberts, Montpelier, Ind.
- 776,035. Tire [having puncture preventing concave steel plates within the tread]. W. C. Stokes, New York city.
- 776,047. Tire rim [adapted to the "Fawkes" cushion tire]. C. G. Fawkes, Denver, Colo.
- 776,101. Golf ball holder. W. B. Anderson, New York city.
- 776,108. Hoof pad. J. A. Buck and G. Hassler, New York city.
- 776,226. Weather strip for doors. T. E. Duncombe, Cleveland, Ohio.
- 776,372. Inhaler and sprayer. J. E. Anderson, Montezuma, Iowa.
- 776,440. Waterproof coat. A. R. Underdown, Haddonfield, N. J.
- 776,463. Vehicle wheel [with sectional rubber tire]. E. Gates, Modesto, Cal.
- 776,468. Fountain toothbrush [having a rubber bulb in the handle]. A. Hosmer, Fort Worth, Texas.

*Trade Marks.*

- 43,757. Rubber boots and shoes. W. F. Mayo & Co., Boston. *Essential feature.*—The word VICTORIA. Used since Sept. 1, 1902.
- 43,761. Certain named waterproof outer garments. The M. Lindsay Rubber Co., New York city. *Essential feature.*—The representation of a three bladed propeller in end view, across which is the word AGNOTA, the whole enclosed within a circle. Used since Aug., 1901.

ISSUED DECEMBER 6, 1904.

- 776,482. Pyrographic-pencil exciter. J. Anderson, Chicago.

- 776,544. Combination pencil sharpener and eraser. C. Payne, Los Angeles, Cal.
- 776,650. Pneumatic tire. C. E. Duryea, Reading, Pa.
- 776,656. Tire. [Cushion or pneumatic.] C. G. Fawkes, Denver, Colo., assignor to The Fawkes Rubber Co.
- 776,691. Device for grooving or tapping rubber or other sap-yielding trees. Cora A. Sanborn, Chicago.
- 776,697. Puncture plug for pneumatic tires. F. A. Sieverling, Kansas City, Mo.
- 776,772. Composition horseshoe. [Steel and rubber.] H. Bartley, Pittsburgh, Pa.
- 776,795. Composition horseshoe. [Steel and rubber.] G. J. Peacock, Buffalo, N. Y., and H. Bartley, Pittsburgh.
- 776,819. Attachment for vulcanizers. A. J. White, assignor to The Williams Foundry and Machine Co., both of Akron, Ohio.
- 776,824. Exercising apparatus. W. J. Bryon, Jr., New York city.
- 776,833. Dental vulcanizer. A. Goebel, Camden, N. J.
- 776,908. Artificial limb. S. J. Henry, Princeton, Iowa.
- 776,914. Truss pad. A. E. Johnson, Bloomington, Ill.
- 776,925. Soft-tread horseshoe. F. M. Miller, New York city.
- 776,951. Fountain pen. J. Sinnott, Chatham, Ill.
- 776,979. Vulcanizer. J. K. Williams, assignor of one half to The Williams Foundry and Machine Co., both of Akron, Ohio.
- 777,022. Horseshoe. I. G. Howell, Hopewell, N. J.
- 777,045. Process of covering golf balls by the use of plastic or Gutta-percha strips. F. H. Richards, Hartford, Conn., assignor, by mesne assignments, to Perfect Golf Ball Co., a corporation of Maine.

*Trade Mark.*

- 43,815. Rubber balls. Lambertville Rubber Co., Lambertville, N. J. *Essential feature.*—The words HIGH FLYER. Used since Aug. 1, 1904.

[NOTE.—Printed copies of specifications of United States patents may be obtained from THE INDIA RUBBER WORLD office at 10 cents each, postpaid.]

## GREAT BRITAIN AND IRELAND.

## PATENT SPECIFICATIONS PUBLISHED.

The number given is that assigned to the Patent at the filing of the Application, which, in the case of those listed below was 1904.

\* Denotes Patents for American Inventions.

[ABSTRACTED IN THE OFFICIAL JOURNAL, NOVEMBER 2, 1904.]

- \* 15,225 (1903). Pneumatic tire for bicycles and automobiles. R. A. Harris, Tucson, Arizona.
- 15,254 (1903). Head rest for attachment to baths. C. Rossdam, Berlin, Germany.
- 15,298 (1903). Cleaner for school slates. J. Thompson, West Hartlepool.
- \* 15,474 (1903). Golosh. A. J. Boulton, London. (N. P. Bowler, Cleveland, Ohio.)
- 15,475 (1903). Dress preserver. A. J. Boulton, London. (Trenckmann & Co., Schöneberg, Germany.)
- 15,483 (1903). Hot water bottle stopper. J. H. Nunn and G. Headworth, London.

[ABSTRACTED IN THE OFFICIAL JOURNAL, NOVEMBER 16, 1904.]

- \* 15,614 (1903). Means for setting rivets in treads for pneumatic tires. C. T. Adams, New York.
- \* 15,689 (1903). Pneumatic carpet cleaning device. J. S. Thurman, St. Louis, Missouri.
- \* 15,690 (1903). Air blast apparatus for cleaning carpets. *Same.*
- \* 15,857 (1903). Vibratory instrument for massage. A. J. Boulton, London. (Personal Hygiene Co., Chicago, Illinois.)
- 15,866 (1903). Pneumatic tire. A. Boguslavsky, London.
- 15,905 (1903). Grip pad for printing and folding machines. J. Whitelegg, Manchester, and W. Houghton, Mouton.
- 15,913 (1903). Pneumatic multi-cellular tire. T. T. Vernon, Birkdale, Lancashire.
- \* 15,964 (1903). Inflating valve for tires. J. M. Willis, J. A. White, and W. O. Eddy (Hilton Valve Co.), Middlesboro, Massachusetts.

[ABSTRACTED IN THE OFFICIAL JOURNAL, NOVEMBER 16, 1904.]

- \* 16,128 (1903). Golf ball. [Gutta-percha shell, enclosing a spring core.] W. B. Thompson, Liverpool. (J. B. Marston, Cranford, New Jersey.)



16,338 (1903). Golf ball. [With inner core of box wood, provided with a ball race containing a number of steel balls, and wrapped with India-rubber, the whole being covered with Gutta-percha.] W. M. Short, Beckenham, Kent.

16,424 (1903). Apparatus for spraying disinfectants. A. C. A. Hut-ton, London.

16,506 (1903). Pneumatic roller or pusher. A. W. Turner, Calcutta, India.

\* 16,567 (1903). Solid rubber tire. Raymond B. Price, Chicago, Illinois.

\* 16,576 (1903). Apparatus for applying rubber vehicle tires. *Same*.

[ABSTRACTED IN THE OFFICIAL JOURNAL, NOVEMBER 3, 1904.]

16,651 (1903). Device for removing metal foil from bottles. C. Berlt, London.

16,657 (1903). Razor strop. W. E. Bond, Twickenham.

16,686 (1903). Device for administering anesthetics. Dental Manu-facturing Co. and V. Knowles, London.

16,753 (1903). Finger stall for printing press operators, and the like. J. Andersen, Christiana, Norway.

16,794 (1903). Device for detecting leakages in water, steam, and other pipes. W. Lynes, Sparkhill.

16,800 (1903). Golf ball [with core of glass or lead surrounded consec-utively by aluminum, cork, and India-rubber, with an outer casing of Gutta percha; or these materials may be dispensed with and a solid compressed cork center used]. C. A. F. Gregson, Acocks Green, Warwickshire.

16,942 (1903). Door mats [of India-rubber or other material, in combi-nation with laths and crossbars]. F. W. Croucher, Fleet, Hamp-shire.

\* 16,982 (1903). Golf ball. P. M. Justice, London. (Cambridge Manufacturing Co., New York.)

17,098 (1903). Pneumatic tire. L. Azulay, Southwick, Sussex.

[ABSTRACTED IN THE OFFICIAL JOURNAL, NOVEMBER 3, 1904.]

17,156 (1903). Non-inflammable rubber solution. I. Frankenburg, Ltd., R. J. Frankenburg, and F. H. Betteridge, Salford, Man-chester.

17,176 (1903). Protective cover for pneumatic tires. J. A. Mays, Hempstead, Middlesex.

17,187 (1903). Repair device for hose pipes. S. S. Bromhead, London. (G. Ewald, Cüestrin, Germany.)

17,210 (1903). Retaining means for resilient tires. C. T. J. Oppen-mann, Camden Town, London.

17,227 (1903). Hoof pad. J. H. Baylis Croydon.

17,293 (1903). Surgical syringe. G. Pearson, Nottingham.

\* 17,318 (1903). Golf ball. S. E. Page, London. (I. B. Kleinert Rubber Co., New York.)

\* 17,340 (1903). Combined pin cushion and paper weight. C. L. Royer, St. Joseph, Missouri.

\* 17,465 (1903). Pneumatic tire. H. E. Irwin, Galesburg, Illinois.

17,508 (1903). Bottle stopper [including rubber disc]. E. Ritsert, Frankfurt o/M., Germany.

17,604 (1903). Pneumatic tire. A. Levert, Duisberg a/Rh., Germany.

#### PATENTS APPLIED FOR—1904.

Space is given here only to Applications for Patents on Inventions from the United States.

24,778. George F. Butterfield, London. Improvements relating to the vulcanization of rubber soles to boots and shoes. Nov. 15.

24,891. F. C. Brown, London. Improvements in fountain pens. Nov. 16.

25,091. A. M. Flack, London. Improvements in fountain pens. (James W. Williams, United States.) Nov. 18.

#### GERMAN EMPIRE.

DESIGN PATENTS GRANTED [GEBRAUCHSMUSTER].

235,837 (Class 304). Elastic woven double tube catheter. Rusch-Compagnie, G. m. b. H., Cannstatt. Oct. 26.

235,838 (Cl. 304). Elastic woven nose douche with forked outlet. *Same*. Oct. 26.

235,436 (Cl. 64a). Bottle stopper. A. Schenke. Oct. 26.

235,499 (Cl. 71a). Laced shoes with rubber side pieces. Frau M. Wolff, Pirasens. Oct. 26.

236,336 (Cl. 63a). Tire inner tube, with ends held together by a sleeve. Continental Caoutchouc- und Gutta Percha-Co., Hannover. Nov. 2.

236,545 (Cl. 304). Catheter of soft rubber. Rusch-Compagnie, G. m. b. H., Cannstatt. Nov. 9.

237,118 (Cl. 30d). Ice bag for the neck. Dr. A. Löwenstein, Elber-feld. Nov. 9.

236,595 (Cl. 39a). Porcelain model for seamless sheet rubber nursing bottle nipples. S. R. Wolff & Co., Wevelinghoven. Nov. 9.

237,119 (Cl. 30d). Ice bag for the neck. Dr. A. Löwenstein, Elber-feld. Nov. 9.

236,802 (Cl. 64a). Bottle stopper, having a rubber packing disk cov-ered by a cork. Holzapfel & Co., Altona-Ottensen. Nov. 17.

236,809 (Cl. 64a). Bottle stopper, containing a perforation and a rub-ber disc serving as a back-pressure valve. W. Rosenberg, Ham-burg. Nov. 17.

236,857 (Cl. 71a). Laced and buttoned shoes with rubber side pieces. J. Laumbacher. Nov. 17.

#### APPLICATIONS.

25,932 (Class 77a). Indoor gymnastic appliances consisting of an ar-rangement of elastic cords. Industriewerke für Heilgymnastische Apparate Maschinen und Metallwaren, G. m. b. H., Solingen. Nov. 9.

#### THE FRENCH REPUBLIC.

PATENTS ISSUED (WITH DATES OF APPLICATION).

344,077 (June 16, 1904). J. de Raguet de Brancion. Anti skidding device for tires.

344,267 (May 11). P. Augeyrolle and F. Rey. Pneumatic tire pro-tector.

344,423 (June 29). The Hartford Rubber Works Co. Device for at-taching elastic tires to vehicle wheels.

344,468 (June 30). A. Beaujon. Protective and anti skidding cover for pneumatic and other tires.

344,502 (July 1). Hell, Leeson and the County Chemical Co., Limited. Portable device for vulcanizing and repairing automobile tires.

344,518 (July 1). A. Smolikowski. Closed rubber tubes for elastic tires and for other purposes.

344,734 (July 9). A Kittel. Process for reclaiming vulcanized rubber waste.

344,827 (July 16). J. Birtwisle. Improvement in pneumatic tires.

344,828 (July 16). Latay et Cie. Protective band for pneumatic and other tires.

344,888 (June 24). Bouchet & Jalabet Co. Anti skidding tire protector.

344,898 (July 9). J. Chambet. Tire for bicycles, motorcycles, and automobiles.

245,020 (July 22). P. F. E. Christiens. Process and apparatus for treating rubber latex.

345,042 (July 1). G. H. and A. E. Sherman. Pneumatic tire.

345,059 (July 23). R. M. Meyer. Pneumatic tire cover for automo-biles.

[NOTE—Printed copies of specifications of French patents may be obtained from R. Bobet, Ingenieur-Conseil, 16 avenue de Villiers, Paris, at 50 cents each, post paid.]

#### INDIA-RUBBER GOODS IN COMMERCE.

##### EXPORTS FROM THE UNITED STATES.

OFFICIAL statement of values of exports of manufactures of India-rubber and Gutta-percha, for October, 1904, and for the first ten months of five calendar years:

MONTHS.	Belting, Packing, and Hose.	Boots and Shoes.	All other Rubber.	TOTAL.
October, 1904.....	\$ 77,671	\$133,408	\$ 197,263	\$ 408,342
January-September.	647,245	844,802	1,779,250	3,271,303
Total.....	\$724,916	\$978,210	\$1,976,519	\$3,679,645
Total, 1903....	710,825	790,903	1,555,756	3,592,591
Total, 1902....	596,272	865,711	1,659,205	3,121,188
Total, 1901....	502,264	733,329	1,470,176	2,705,769
Total, 1900 ...	443,939	526,878	1,260,961	2,231,778

Imports of rubber goods (in value) have increased at a rela-tively higher rate: In the last 10 months; \$873,788; same months 1903, \$589,270; same months in 1902, \$461,574. In-crease this year over last, 48 per cent.

**The place where 3000 busy workmen daily  
add to the store of good things in rubber.**



**The home of  
GOODRICH RUBBER GOODS**

**Mechanical Rubber Goods**

**Druggists', Surgeons' and**

**Stationers' Rubber Sundries**

**Automobile Tires**

**Carriage Tires**

**Bicycle Tires**

**Haskell Golf Balls**



**THE B. F. GOODRICH COMPANY**

**AKRON RUBBER WORKS**

**AKRON, OHIO**

**BRANCHES**

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**CHICAGO**

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157 Summer Street

**PHILADELPHIA**

922 Arch Street

**BUFFALO**

9 W. Huron Street

**CLEVELAND**

42 Superior Street

**LONDON, 7 Snow Hill, E. C.**

**DETROIT**

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**DENVER**

1444 Curtis Street

**SAN FRANCISCO**

392 Mission Street

*Mention The India Rubber World when you write.*



# NEW YORK BELTING *and* PACKING CO., Ltd.

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Engine and Tender, Fire, Garden, Gas, Linen, Mill, Pneumatic Tool  
Signal, Steam, Suction and Water Hose

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## The Mechanical Rubber Company,

CHICAGO, ILL.

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If you are unable to satisfy your trade with goods you are supplying,  
If you are in search of good goods at fair prices,  
If you cannot get quick deliveries,  
If you are not getting fair value for your money,  
IN ANY EVENT,

SEND TO US FOR SAMPLES AND  
QUOTATIONS. . . . .  
WE CAN SUIT YOU EVERY WAY.

FACTORY, GRAND AVE. & ROCKWELL STS

**THE MECHANICAL RUBBER CO., 230 Randolph St., Chicago, Ill.**

*Mention the India Rubber World when you write.*

## SMALL BEGINNINGS OF A COMING (?) GREAT INDUSTRY.

THE illustration which appears on this page results from photographing a specimen plant mailed to THE INDIA RUBBER WORLD by Mr. George Leonhardy, of Denver, Colorado, who was mentioned in the November 1, 1904, issue of this Journal (page 36) as one of the incorporators of the Riverside Crude and Refined Rubber Co., with \$1,000,000 capital, authorized "to gather the plant and manufacture the rubber therefrom." The specimen referred to measures exactly 13½ inches from the flowers at the top to the lower extremity of the root as shown in the illustration, from which statement an idea may be gained of the diameter of the root sections, which are stated to be the only rubber producing portion of the plant. From a Denver periodical, *The Conquest*, also sent by Mr. Leonhardy, the following paragraphs are extracted:

"*Actinella Richardsonii*, sometimes called *Picradenia floritunda utillis*, belongs to the *Actinella* family, of which there are a number of different species. It is found in Chaffee county, Colorado, at an altitude of from 7500 to 9000 feet. It is a shrub from 6 to 16 inches high, which, when in bloom, has a small yellow blossom resembling in appearance and odor the camomile blossom. The rubber is extracted from the root of the plant. It yields from 10 to 20 per cent. of rubber. The highest percentage is obtained in the fall of the year, after the seed has ripened and the sap in the plant has returned to the root. The plant above the soil has a very small percentage of rubber. While it has been reported that the plant has been found in many localities in the state, Mr. George Leonhardy says he has so far not met with it in any other locality except as above stated. It is also reported that there have been other plants found in Colorado yielding rubber, a number of such plants having been sent to him for investigation, in all of them he has failed to find rubber. The rubber obtained from the plant has been thoroughly tested and is found to be equal and in some instances superior to the Pará rubber.

"By cultivation the plant increases in size and improves in quality, yielding a large percentage of rubber. The plant can be cultivated from the seed, or from transplanting of the root.

"Mr. Leonhardy has invented a process for extracting the rubber by disintegration. So rapid and efficient is this process that an ordinary gasoline stove and common kitchen utensils can be used successfully for laboratory purposes. No plant for the production of rubber on a commercial scale has been attempted as yet, owing to the transition state through which the industry is passing. The increasing demand will undoubtedly

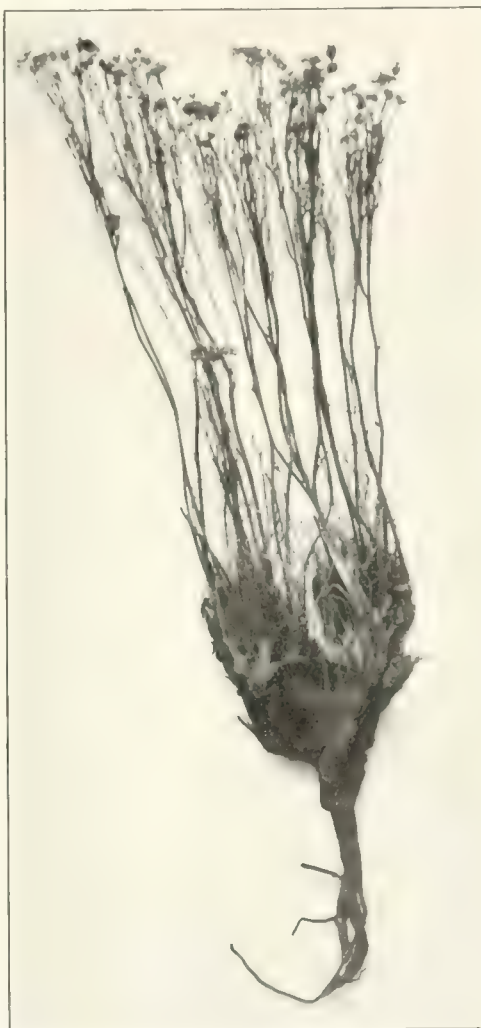
make a factory of large capacity a necessity in the near future. The present crude apparatus used by Mr. Leonhardy in preparing samples of manufactured rubber in a laboratory way can be enlarged to produce merchantable rubber on a commercial scale."

\* \* \*

THERE is still another Colorado rubber company in the field. The Salida Crude Rubber Co. was organized on December 5, at Salida. Franchises were granted to the company and a building was donated by the citizens and business men, with the idea that a factory would be in operation by January 1, with a capacity for treating 10 tons of the rubber weed daily, by "an entirely new process." The principal organizer of the company is Harvie Du Val, who is variously described as a wealthy lawyer of Santa Fé, as having made a fortune in Louisiana lumber before coming west to invest in mines, and as having been interested in some very successful ventures in the rubber industry in South America. Mr. Du Val is said to be backing the enterprise with personal capital, together with that secured from Florida and New Mexico parties, and does not hesitate to say that he already has enough money at hand to give the proposition a thorough test. Associated with him is Ben F. Spencer, one of the original discoverers of the Colorado rubber plant, who accidentally came across it in 1902, while at work "quite a distance from water." Becoming thirsty, he began to chew on the first plant within reach, when he found it to contain rubber. "By chewing and saving he had a piece as large as a hen's egg by the time he left for Denver," according to a pamphlet on "The Colorado Rubber Plant," by Mr. O. J. Kennedy, secretary of the Salida Board of Trade, who does not hesitate to add: "From this accident we now have probably one of the greatest industries in the age started." Mr. Spencer at one time was under contract with the Continental Crude Rubber Co., but "succeeded in proving to the courts that the Continental company had not fulfilled their agreements with

him, and the contract was forfeited. Thereupon Spencer and DuVal joined hands and secured the coöperation of R. D. Main, of Buena Vista, together with his patented extraction mill. The *Salida Record* says:

This machine merely consists of an inner cylinder revolving against an outer one, and in the space between the root pulp will be ground and masticated all the time, covered with hot water containing a very small portion of a certain chemical. As this process goes on, under the influence of the chemically charged hot water, the gum gradually precipitates



THE COLORADO RUBBER PLANT.

[Photographed from a specimen sent by Mr. George Leonhardy, of Denver.]



together and as it sinks to the bottom and is taken out the crude rubber will be found to be in roll shaped pieces, sometimes an inch or more in diameter and from 3 to 5 inches in length.

The Salida paper further says that "the cultivation of and the extraction of rubber from the Colorado rubber weed are two subjects which are and have been for months past foremost in the mind of scientists and rubber dealers all over the world. - - - There is no doubt that the state has given birth to a new industry which may excel any other interest."

And Mr. Kennedy, above mentioned, writes to THE INDIA RUBBER WORLD:

We believe a new industry has been born. Everything has a beginning, all things were once small, all things start from tiny initial point. Had we "set down" on new things during the past, we would to-day be walking around killing our game with a club and wearing breech clouts.

The Denver *News* says of the Colorado rubber district: "Salida is the most natural center for this territory, and it is the desire of the board of trade to make it a manufacturing center for the rubber industry. - - - The board has now in its possession the only available seed in the world." In a later issue the same journal says: "It has been demonstrated that there are mills which can produce a very fine quality of the rubber and



THE TRUE DISCOVERER OF COLORADO RUBBER.

[The artist, C. F. Carter, is the author of the following article.]

there is a standing offer from the Salida board of trade of 70 cents to \$1 for every pound of rubber produced from the plant."

\* \* \*

THE true story of the discovery of rubber in Colorado is related at length in an article signed by C. F. Carter and "syndicated" to a number of newspapers, including the Brooklyn *Daily Eagle*, which published it on December 18 last. The salient feature of Mr. Carter's article is the following paragraph, in connection with which we reproduce from the *Daily Eagle* a very informing illustration of the ill-fated lamb:

"The plant is the first green thing to be found in the spring, and for that reason is eaten up by sheep when they are permitted to get at it. But the sheep men found that their sheep grew weak and emaciated and finally died after feeding on rabbit weed. It never occurred to any one to ascertain the manner in which the weed produced the fatal effect until Myron G. Brownell, a Denver real estate man, visited a friend engaged in the sheep business near Buena Vista. The friend had a valuable ram that had carelessly been permitted to browse on rabbit weed, and a couple of weeks later died with the usual symptoms. At Mr. Brownell's suggestion a *post mortem* was held on the ram. The stomach was found to be filled with pellets of a black gum. This gum was perfectly indigestible, and so had

caused death. Mr. Brownell had some of the substance examined by a Denver chemist, who said it was rubber."

\* \* \*

IN response to many inquiries received by THE INDIA RUBBER WORLD as to the product of the plant above referred to, it may be said here that the specimen photographed for the accompanying illustration would appear to be equally fitted to yield rubber or gooseberry wine or counterfeit money. The Editor has not yet found an opportunity, however, to test its rubber properties, either by chewing it as an antidote to thirst, on a western prairie, or by undergoing the experience of the dying lamb shown in the second illustration herewith.

## THE HORN COMB INDUSTRY.

TO THE EDITOR OF THE INDIA RUBBER WORLD: Referring to the article in your December 1 issue (page 100), on "An Old Comb Factory Closed," may add that, according to Coffin's "History of Newbury," the manufacture of combs was established in Newbury (now West Newbury) by Enoch Noyes, in 1759. Mr. Somerby N. Noyes, whose death you reported, sustained the same relation to Enoch Noyes as ourselves—great grandsons. His mother and our father were sister and brother.

David E. and William, grandsons of Enoch, made many important improvements in machinery for making horn combs. The firm of S. C. Noyes & Co., composed of S. C. Noyes, Hayden Brown, William Noyes, and S. N. Noyes, in 1859, were the first to make a success of making rubber fine tooth combs, William Noyes taking out a patent in that year for a machine for sawing the teeth in fine combs.

Somerby N. Noyes was the only survivor of the firm of S. C. Noyes & Co., and he sold out his business to us before his death—on October 22, 1904—the machinery to be delivered after he had finished up the stock in process, which he did the week before his death.

The combs made by Mr. Noyes and ourselves are all made from steer horns, which come largely from South America, via Europe. There are to-day only five factories that we know of that are making horn combs: Jacob W. Walton Sons, Philadelphia; David H. Graham, Lancaster, Pennsylvania; Joseph P. Noyes & Co., Binghamton, New York; and G. W. Richardson Co., and ourselves in this city.

In regard to the importance of the horn comb trade to-day, as compared to its past importance, we would say that, in our opinion, while years ago there were a good many places where horn combs were made, the larger part of them were small, although we think the total number of dressing combs made was bigger than to day. In Leominster, Massachusetts, where horn was formerly used for fancy combs worn by the ladies, celluloid has taken the place of horn, although the Leominster Directory gives 22 workers of horn, which really means makers of hair pins, which take practically all the horns that are produced in this country. The introduction of rubber as a material for combs has had the effect to make the price of combs cheaper. The use of horn for hair pins, together with the dehorning of a large per cent. of cattle in the West, has made the price of horn very high.

Regarding the comb makers' trust, which some of the newspapers mentioned the late Mr. Noyes as having been the head of, we know nothing of any such organization. Yours very truly,

W. H. NOYES & BRO. CO.,  
M. B. NOYES, Secretary.

Newburyport, Massachusetts, December 6, 1904.

SAMUEL B. THORP, a member of the firm of W. H. Noyes & Bro. Co. since 1887, died at his home in New York on December 8, aged 59 years.

## SOME RUBBER INTERESTS IN EUROPE.

## ADVANCE ON RUBBER GOODS IN GERMANY.

A MEETING of rubber goods manufacturers, for the purpose of discussing the perplexing condition of prices, was held at Berlin on December 2. Thirty-one factories were represented by 33 persons. Herr Director Hoff (Harburg a/d Elbe) opened the meeting at 10.15. The condition of the rubber industry and measures for its improvement was the subject to be discussed. After a preliminary review of the high prices of raw rubber, the necessity of advancing prices of rubber goods was recognized, and the following resolutions passed:

For technical articles of soft rubber a commission to establish the minimum prices, was formed, viz.: Vereinigte Gummiwaren-Fabriken Harburg-Wien, Harburg a/E.; Franz Clouth, Rheinische Gummiwaren-Fabrik m. b. H., Cöln-Nippes; Vereinigte Hanfschlauch- und Gummiwaren-Fabriken zu Gotha, A.-G.; Hannoversche Aktien-Gummiwaren-Fabrik, Hannover; Asbest- und Gummiwerke Alfred Calmon, A.-G., Harburg; Aktiengesellschaft für Fabrikation Technischer Gummiwaren C. Schwanitz & Co., Berlin.

For surgical articles of soft and hard rubber a commission consists of Hannoversche Gummi-Kamm-Compagnie, A.-G., Hannover-Limmer; Gustav Wellmann, Hannover-Hainholz; Leipziger Gummiwaren-Fabrik, A.-G., vorm. Julius Marx, Heine & Co., Leipzig; Phil. Penin Gummiwaren-Fabrik, A.-G., Leipzig-Plagwitz; C. Müller, Gummiwaren-Fabrik, A.-G., Berlin.

For gummed stuffs, a commission consists of Vereinigte Gummiwaren-Fabriken Harburg-Wien, Harburg, a/E.; Continental Caoutchouc- und Guttapercha-Compagnie, Hannover; Mannheimer Gummistofffabrik Rode & Schwalenberg, Mannheim.

The commissions have the privilege of adding to their numbers. It is also anticipated that an agreement among the factories on erasing rubber will be formed. In order to come to an agreement with the Verband Deutscher Asbestwerke, G. m. b. H., Frankfurt a/M., negotiations will be entered into with the representative of that organization.—*Gummi-Zeitung, December 9.*

## A CONSUL ON THE GERMAN RUBBER INDUSTRY.

THE American consul general at Berlin, Mr. Frank H. Mason, reports to his government that the rubber industry in Germany is in a state of depression out of all proportion to the general industrial depression in that country. Not that there has been any decline in the demand for rubber goods of every kind; on the contrary, there is a steady increase in the consumption of such articles. The critical situation is due mainly (1) to the greatly increased cost of crude rubber and (2) to overproduction, resulting from an injudicious increase in the number and capacity of rubber factories since 1899. A third cause is the fact that during two or three years past several large electrical manufacturing companies, which previously were large consumers of rubber supplies, have, in the interest of economy, entered upon the manufacture of their own requirements in such goods. In view of the overproduction, manufacturers have not been able to force up the selling prices of their product in keeping with the increased cost of raw materials. Efforts made to form a trust or selling syndicate to control the output and fix prices have failed, owing to the refusal of so many manufacturers to act in the matter. It is mentioned that such a syndicate,

or *kartel*, was readily formed in Austria, where only a few rubber factories exist. Mr. Mason reports: "The German rubber manufacturers charge that the high cost of crude Caoutchouc is due almost wholly to manipulation, especially in England, where a few powerful firms are able to control the supply and fix prices for the whole of Europe." It has been urged, therefore, that the Germany manufacturers should strive to emancipate themselves from the English Caoutchouc market by establishing direct relations with original sources of supply. [It might be pointed out that of the crude rubber imported into the United States during the last fiscal year, 56 per cent. was imported direct from Brazil and only 13 per cent. from England. Yet manufacturers paid practically the same prices as were paid in Germany. There is needed further proof that rubber prices are fixed in Liverpool; indeed, it is strongly asserted there that the "manipulation" is carried on in New York.—THE EDITOR.]

## THE SILVERTOWN COMPANY'S REPORT.

THE report of the India Rubber, Gutta Percha, and Telegraph Works Co., Limited (London), for the business year ended September 30, shows gross profits of £119,010, against £196,097 for the preceding year, and £163,725 in 1902. The company wrote off £21,059 for depreciation against £46,150 last year, but that was an exceptionally large figure and the year was one of good profits. The amount carried forward this year is £52,274 against £56,930 last year. The dividend for the year is 5 per cent., this being the first time that it has fallen below 10 per cent. The general business of the company shows an increase when compared with last year; but, unfortunately, the sales have been made on a rapidly rising market for raw material, and the selling prices of manufactured goods have not proportionately increased. Moreover, the revenue for the year has been charged with amounts expended on the development of a new business which has not yet reached a remunerative stage. These two causes account for the serious falling off in revenue, but the directors think that the revenue for the current year will not be injuriously affected to a like extent. The *Dacia* and *Buccaneer* have been employed in cable repairing work during the year, and these two vessels are at present under charter. The works at Silvertown and Persan (France) have been maintained in their usual state of efficiency, and extensions continue to be made. In April last the board made an issue of £100,000 second debentures, which has increased the yearly interest charge from £12,000 to £14,250. Following the appearance of the report the quotation of the £10 shares, which as a rule varies little, fell from 18½ to 17¼, but the latter figure indicates how little the market is disturbed by what may be regarded as a mere temporary decline in the company's prosperity.

## RUBBER INSULATED CABLES FOR CUBA.

HOOPER'S Telegraph and India-Rubber Works, Limited (London), on November 19, shipped 470 nautical miles of submarine cable, insulated with "Hooper's core" (India-rubber), to be laid by the Cuba Submarine Telegraph Co., Limited, between Cienfuegos and Santiago (420 miles), and for repair work on existing cables in Cuban waters. The first Cienfuegos-Santiago cable was made at the Hooper works in 1875 and lasted 28 years, until last year. In 1881 some sections of deep sea cable remaining at the Hooper works (made in 1873) were spliced into a cable which was laid between Cienfuegos and Santiago, under a twelve years' guarantee. [See THE INDIA RUBBER



WORLD, October 15, 1893—page 3.] It worked without accident for ten years, and with repairs worked for six years longer, when the sheathing became worn out. The Hooper works have also built for the Cuba Submarine Telegraph Co., Limited, 481 miles of rubber insulated cables, as follows: Cienfuegos-Batabano—two cables (1891 and 1894); Santiago Cape Cruz (1897); Cape Cruz-Manzanillo (1897).

#### NEW PEGAMOID, LIMITED.

At the third annual meeting (London, December 7) the chairman, Mr. Andrew Haes, stated that there had been an increase in trading, and larger gross profits than in any preceding year, though on account of increased expenses net profits had been smaller. Several travelers have been employed, the result of whose work was to be expected in future profits. The company had not been obliged to pay the high prices for camphor ruling during the year, on account of having held large supplies, and they expected to benefit largely from the reduction in cotton prices which lately set in. The company were making leather cloth suitable for railway carriage seats and other upholstery work; sheetings for waterproof carriage rugs and wagon covers; Pegamoid colors and paints, and "a particular class of goods which are much used by the medical world." An item of £8008 in the balance sheet represents the cost of the shares in the Continental Pegamoid, which this year paid a 2½ per cent. dividend, and is reported to be doing fairly well and increasing its business.

#### GERMAN DUTY ON RUBBER HOOFPADS.

The Prussian minister of finance has, in accord with the Imperial chancellor of customs, decreed, under date of October 27, 1904, that hoofpads of soft rubber, with pressed patterns, which are placed under the shoes of horses, and covering the sole of the hoof wholly or in part, are to be subject to a duty of 60 marks per 100 kilograms [=about 6½ cents per pound]. The patterns embossed, or pressed, on those goods in the form of ribs, points, or stars, for the purpose of preventing slipping of the horses, must be considered as stamped designs, the word design embracing all possible surface patterns, no matter whether they are intended for ornamental or practical purposes.

#### RUBBER SHOE PRICES IN GERMANY.

A PRICE convention has been organized by the Vereinigte Gummiwaaren-Fabriken, Harburg-Wien, and the Asbest- und Gummiwerken Alfred Calmon, Aktiengesellschaft (Hamburg), relating to their output of rubber footwear. The *Gummi-Zeitung* expresses the hope "that this definite combination may for a long time to come, assure the profitable coöperation of the two companies."

#### GREAT BRITAIN.

THE Rubber Chemical Co., Limited (Birmingham), on account of the increasing demand for their reclaimed rubber and "Seringa" brand of chemicals for the rubber industry, have been compelled to remove to larger premises, and are to be addressed in future at Seringa buildings, Ludgate Hill, Birmingham.

—THE INDIA RUBBER WORLD'S correspondent writes: "A works has recently been established at Willesden, near London, for the manufacture of a new rubber like substance named Camphalte. So far I have not seen any of the product, which by its title suggests the use of camphor, but hope to make its acquaintance before long. The managing director of the new concern is Mr. Stewart Campbell, the address being 9, Hythe road, Willesden Junction."

—Mr. Louis Hoff, managing director of Vereinigte Gummiwaaren-Fabriken, Harburg-Wien (Harburg a/d Elbe, Germany),

on the evening of November 23 invited the staff of the London branch to a banquet at the Hotel Cecil, when the chief clerk, Mr. H. Wohliebe, received a diploma and medal commemorating 25 years' service. The present of a check from the company was included, and also a gold watch subscribed for by the staffs in London, Harburg, and elsewhere.

#### GERMANY.

VEREINIGTE Gummiwaaren-Fabriken, Harburg-Wien, are actively exploiting their new rubber sponges, based upon their patent, described in THE INDIA RUBBER WORLD, June 1, 1903 (page 301).

#### ITALY.

PIRELLI & CO. (Milan) announce the award to them, at the St. Louis World's Fair, of a grand prize for rubber goods and two gold medals for insulated wires and cables. Special medals were awarded to their factory superintendents, Emilio Calcagni and Francesco Piaazza, and their secretary, Carlo Fratino; also, a gold medal to their chief electrician, Emanuele Jona, for a paper on "Insulating Materials in High Tension Cables," read before the International Electrical Congress. The capital of Pirelli & Co., it is reported, has been increased from 5,500,000 *lire* to 7,000,000 *lire* [= \$1,351,000].

#### NEW TRADE PUBLICATIONS.

BOSTON WOVEN HOSE AND RUBBER CO., have issued a new General Catalogue, comprising eleven department catalogues, several of which have received notices at different times in our pages. In the statement of its purpose the catalogue is simple and direct in tone, and it is well printed and illustrated. There is not only an enumeration of the products of the company's factories, but much detailed information bearing upon the quality of goods and the considerations to be kept in mind by customers in purchasing, which details are fittingly supplemented by the illustrations. To indicate the completeness of the catalogue, it may be mentioned that 10 pages are devoted to Fruit Jar Rings alone. The first position in the catalogue, however, is given to Belting, and next importance is the department relating to Hose. Packings, Insulating Tapes, and Molded Goods are also given prominence. The various department catalogues may still be obtained separately. [5¼" × 7¾". 194 pages.]

THE catalogue of "Automobile Garments and Requisites" issued by the great New York drygoods store of SAKS & CO. deserves to be mentioned in a list of rubber trade publications on account of its including so many waterproofed articles. Among the articles to which the numerous handsome illustrations relate are included many styles of coats for men and women, ponchos, couverture pantaloons, lap and foot robes, caps, hoods, and the like, the whole indicating that in connection with automobiling an important new field has been developed, in America as in Europe, for rubber in waterproofing. [5¼" × 8¼". 272 pages.]

THE excellence and completeness of the fifth edition of the illustrated price list of the LEIPSIZER GUMMIWAAREN-FABRIK AKTIENGESELLSCHAFT, vorm. Julius Marx, Heine & Co. (Leipzig, Germany), were commented upon at length in these columns promptly upon its appearance. We have also mentioned a French edition of the work, being a complete translation, without abridgment. The same completeness characterizes an English edition, in which 170 pages are devoted to the list proper; 149 pages to illustrations of the articles referred to; and 25 pages to miscellany, the pages measuring 7½ × 10 inches.



FACTORY OF THE COMBINATION RUBBER MANUFACTURING CO. (BLOOMFIELD, N. J.)

### THE NEW COMBINATION RUBBER COMPANY.

THE Combination Rubber Manufacturing Co. (Bloomfield, New Jersey) are operating one of the historic factories of the United States. It was started by John Greacen, one of the pioneers of the business. For many years, although the factory buildings were old fashioned and the machinery hardly up to date, a safe and profitable business was carried on, the firm name being the Combination Roll and Rubber Co. Later the Greacen heirs sold their interests and the Combination Belting and Packing Co. was incorporated, when a fine new factory was erected and equipped with up to date machinery, all of which is inherited by the present company, The Combination Rubber Manufacturing Co.

The "new factory" is a fine four story brick building of mill construction, 60 x 150 feet. The ground floor is in part a store room for rubber and other supplies, the upper stories being used as follows: The second floor for offices, sample room, shipping, etc.; the third for belting, and the fourth for hose; while above there is a spacious attic, which has been admirably fitted up as a drying room for crude rubber.

The belting department is equipped with everything necessary to turn out a full line of rubber belting, including a duck splitter, belt making machine, Singer belt stitcher, a vulcanizer 8 x 12 feet, a Farrell belt press 34 feet by 60 inches and so on. In the hose room are a hose making and wrapping machine, a 55 foot vulcanizer tubing machine, etc.

Most of the heavy machinery is set in the old mill, which adjoins the new one. For a power plant there are three boilers: One 300 HP. Hazleton; one 350 HP. McNeil; and one 150 HP. Zell safety. The engines are one 175 HP. high speed for the electric lights, and one Allis-Chalmers-Corliss of 375 HP. with a 125 HP. auxiliary. There is also 100 HP. water power. The plant is well supplied for shipping, being near both the Erie and the D. L. and W. rail-

roads, and receives coal by the D. L. and W. canal, which passes within a few feet of the boiler house.

The rubber machinery consists of 2 washers, 15 mixers, 5 calenders, 18 presses, 3 tubing machines, and 5 vulcanizers, in addition to what has been before mentioned. There are also a fully equipped carpenter and machine shop. The factory is fitted with automatic sprinklers, electric lights, freight elevators, and a Sturtevant heating system.

Edward H. Garcin, the president and general manager, has long been in the rubber business. At the age of 20—he was born in Virginia, in 1864—he became a salesman in the southern field for the old Trenton Rubber Co. After a year, during which his capacity was demonstrated, he left this connection to establish at Richmond the jobbing house of Garcin, Moseley & Bohmer. Again he joined the forces of the Trenton concern, first in charge of their entire southern trade, to which was later added the western field and the Pacific coast. In 1895 he was called to Trenton as vice president and general manager of the company, continuing his connection after the reorganization, two years later, as the Trenton Rubber Manufacturing Co., until his recent retirement to go to Bloomfield.



PRESIDENT E. H. GARCIN.

Mr H. L. Hepburn, the vice president of the new company, a Cornell graduate, has had but a brief business career, having left an important position with the Western Electric Co., to master the rubber business. Mr. W. Clark Symington is secretary and treasurer. These, together with Mr. R. B. Symington, controller, and Mr. J. W. Clark, treasurer, of The Spool Cotton Co., are the directors and sole stockholders.

As will be seen from the above partial catalogue this is no small factory, and the constitution of the company is understood to involve ample capital for the carrying out of its plans for the manufacture of mechanical rubber goods. It is fair to state that the location of the various buildings is most unsatisfactory for the purposes of photography, and that no single picture could give an adequate view of it.



## OFFICIAL STATISTICS OF INDIA-RUBBER AND GUTTA-PERCHA.

For the United States Fiscal Year Ended June 30, 1904.

## INDIA-RUBBER.

## I.—Imports of Crude India-Rubber, by Countries.

FROM—	Pounds.	Value.
<i>Europe:</i>		
Belgium.....	6,397,282	\$5,241,580
France.....	958,570	681,828
Germany.....	2,438,568	1,466,803
Italy.....	8,911	5,684
Netherlands.....	311,062	261,539
Portugal.....	3,527,797	2,442,845
Turkey in Europe.....	2,631	1,406
United Kingdom.....	7,711,910	5,705,685
<b>Total.....</b>	<b>21,376,742</b>	<b>\$15,807,370</b>
<i>North America:</i>		
British Honduras.....	22,299	\$ 14,184
Quebec, Ontario, Manitoba.....	2,292	1,810
Costa Rica.....	116,434	62,188
Guatemala.....	106,421	39,652
Honduras.....	81,632	43,031
Nicaragua.....	137,088	445,930
Panama.....	786,727	77,674
Salvador.....	47,609	15,207
Mexico.....	366,104	148,921
West Indies—British.....	17,459	7,161
Cuba.....	451	106
<b>Total.....</b>	<b>1,650,516</b>	<b>\$855,854</b>
<i>South America:</i>		
Brazil.....	31,109,112	\$22,442,251
Colombia.....	555,663	278,759
Ecuador.....	1,031,035	548,556
Guyana—British.....	9,061	3,666
Peru.....	103,907	72,076
Venezuela.....	94,826	44,767
<b>Total.....</b>	<b>34,903,604</b>	<b>\$23,390,076</b>
<i>Asia:</i>		
East Indies—British India.....	91,558	\$ 62,556
Straits Settlements.....	978,250	319,565
Other British.....	704	509
Dutch.....	14,197	8,330
<b>Total.....</b>	<b>1,084,689</b>	<b>\$390,950</b>
<b>GRAND TOTAL.....</b>	<b>59,015,551</b>	<b>\$40,444,250</b>
Total, 1902-03.....	55,010,571	30,436,710
Total, 1901-02.....	50,413,481	24,890,230
Total, 1900-01.....	55,275,523	28,455,383
Total, 1899-00.....	49,377,138	31,376,867
Total, 1898-99.....	51,063,066	31,707,620
Total, 1897-98.....	46,055,497	25,286,010
Total, 1896-97.....	35,574,449	17,457,976
Total, 1895-96.....	36,774,460	16,603,020
Total, 1894-95.....	39,741,607	18,353,121
Total, 1893-94.....	33,357,783	15,067,333
Total, 1892-93.....	41,547,680	17,809,239

## II.—Imports of Crude India-Rubber, by Customs Districts.

FROM—	Pounds.	Value.
Boston.....	1,547,438	\$ 1,027,076
New York.....	66,841,201	39,066,399
New Orleans.....	502,458	307,463
Mobile.....	8,045	4,000
Paso del Norte, Texas.....	6,460	669
San Francisco.....	77,517	31,175
Champlain, N. Y.....	29,210	12,228
Niagara, N. Y.....	2,220	1,810
Other ports.....	930	360
<b>Total.....</b>	<b>59,015,551</b>	<b>\$40,444,250</b>

## III.—Imports of Manufactures of India-Rubber, by Customs Districts.

AT—	Value.
Baltimore.....	\$ 8,442
Boston and Charlestown.....	64,721
New York.....	675,758
Philadelphia.....	1,829
Other Atlantic ports.....	8,610
New Orleans.....	2,304
Other Gulf ports.....	1,061

## INDIA RUBBER—Continued.

San Francisco.....	8,051
Other Pacific ports.....	1,777
Chicago.....	30,169
Other northern border ports.....	2,282
St. Louis.....	1,563
Other interior ports.....	2,304
<b>Total.....</b>	<b>\$821,562</b>
Total, 1902-03.....	\$665,972
Total, 1901-02.....	449,766
Total, 1900-01.....	478,663
Total, 1899-00.....	564,083
Total, 1898-99.....	379,309
Total, 1897-98.....	309,247
Total, 1896-97.....	297,953
Total, 1895-96.....	294,228
Total, 1894-95.....	315,902
Total, 1893-94.....	309,308
Total, 1892-93.....	338,435

## IV.—Exports of Manufactures of India-Rubber (and Gutta-Percha), by Customs Districts.

FROM—	Belt, Packing, and Hose.	Boots and Shoes.	All Other Rubber.
Baltimore.....	\$ 54	\$.....	\$ 987
Bangor, Me.....	1,765	452	2,075
Boston.....	10,891	452,116	256,013
New York.....	559,132	513,883	1,407,782
Pasamaquoddy, Me.....	2,579	4,304	1,741
Philadelphia.....	9,994	10,201	821
Portland, Me.....	.....	43	.....
Other Atlantic ports.....	.....	40	.....
Gulf ports.....	4,845	60	2,006
Arizona.....	15,315	33	9,421
Brazos de Sant go, Tex.....	86	.....	29,851
Corpus Christi, Tex.....	327	.....	23,744
Paso del Norte, Tex.....	30,367	439	15,510
Saluria, Tex.....	10,001	70	7,171
Alaska.....	9,550	9,144	163
Hawaii.....	.....	.....	163
Puget Sound, Wash.....	14,047	38,220	25,584
San Diego, Cal.....	761	141	94
San Francisco, Cal.....	134,639	33,908	115,899
Buffalo Creek, N. Y.....	.....	.....	111,179
Champlain, N. Y.....	8,566	.....	129,832
Cuyahoga, Ohio.....	4,554	.....	4,554
Detroit, Mich.....	16,237	2,140	27,761
Huron, Mich.....	3,019	222	12,461
Memphremagog, Vt.....	8,161	1,119	10,013
Minnesota, Minn.....	23	.....	2,041
Niagara, N. Y.....	.....	2,862	140,638
North and South Dak.....	7,956	1,150	7,587
Oswegatchie, N. Y.....	6,686	.....	8,017
Superior, Mich.....	736	229	.....
Vermont, Vt.....	23,260	15,552	115,306
Other border ports.....	413	36	1,099
<b>Total.....</b>	<b>\$890,010</b>	<b>\$1,086,364</b>	<b>\$2,469,750</b>

## GUTTA-PERCHA.

## I.—Imports of Manufactures of Gutta-Percha, by Countries.

FROM—	Value.
Austria-Hungary.....	\$ 678
Belgium.....	17,399
France.....	3,713
Germany.....	108,846
Spain.....	683
United Kingdom.....	204,144
Canada.....	28
Japan.....	9
<b>Total, 1903-04.....</b>	<b>\$335,480</b>
Total, 1902-03.....	\$225,198
Total, 1901-02.....	127,780
Total, 1900-01.....	163,337
Total, 1899-01.....	254,332
Total, 1898-99.....	115,582
Total, 1897-98.....	156,997
Total, 1896-97.....	97,194

Note.—Of the above imports, \$20,000 worth was entered at Pacific ports.

## GUTTA-PERCHA.

## I.—Imports of Crude Gutta-Percha, by Countries.

FROM—	Pounds.	Value.
France.....	2,818	\$ 3,763
Germany.....	174,505	74,818
Netherlands.....	413	911
United Kingdom.....	128,532	56,154
West Indies—British.....	37,770	12,690
Colombia.....	255	47
Guyana—British.....	21,708	7,306
—Dutch.....	1,961	752
British India.....	12,062	6,654
Straits Settlements.....	37,098	8,545
Philippines.....	6,625	3,313
<b>Total, 1903-04.....</b>	<b>424,617</b>	<b>\$174,953</b>
Total, 1902-03.....	316,290	\$222,400
Total, 1901-02.....	625,767	252,329
Total, 1900-01.....	280,560	130,357

## GUTTA-JULETONG (PONTIANAK).

Belgium.....	81,299	\$ 1,298
United Kingdom.....	20,100	1,244
British India.....	118,363	3,191
Straits Settlements.....	14,299,434	408,373
British East Indies.....	368,220	10,125
<b>Total, 1903-04.....</b>	<b>14,887,416</b>	<b>\$430,291</b>
Total, 1902-03.....	13,984,817	\$345,431
Total, 1901-02.....	16,506,821	501,418
Total, 1900-01.....	9,371,087	248,838

## RUBBER SCRAP.

## Quantity and Value of Imports, by Countries.

FROM—	Pounds.	Value.
Belgium.....	82,731	\$ 4,935
Denmark.....	19,104	1,119
France.....	537,626	31,476
Germany.....	3,166,742	178,110
Netherlands.....	2,905	156
Roumania.....	18,899	1,141
Russia.....	8,074,779	493,262
—Black Sea.....	4,385,408	228,886
Norway.....	501,501	30,001
Sweden.....	169,222	10,373
Turkey in Europe.....	250,501	15,648
United Kingdom.....	1,224,990	74,787
British North America.....	1,801,935	91,651
Cuba.....	57,410	3,182
Mexico.....	7,325	521
Other North America.....	2,983	137
<b>Total, 1903-04.....</b>	<b>20,270,970</b>	<b>\$1,164,785</b>
Total, 1902-03.....	24,050,804	\$1,516,137
Total, 1901-02.....	22,894,900	1,437,960
Total, 1900-01.....	15,235,236	988,316

## RECLAIMED RUBBER.

## Exports of Reclaimed Rubber, by Countries, for Four Years.

TO—	Value, 1900-01.	Value, 1901-02.	Value, 1902-03.	Value, 1903-04.
Austria-Hungary.....	\$.....	\$ 700	\$ 481	\$ 1,151
Belgium.....	703	1,250	1,084	26,398
France.....	13,230	38,310	13,932	55,739
Germany.....	48,419	20,191	19,426	20,225
Italy.....	17,604	12,291	11,284	6,932
Netherlands.....	2,734	6,550	9,049	.....
Denmark.....	.....	2,809	.....	.....
Russia.....	575	.....	418	.....
Spain.....	.....	5,552	1,774	.....
Sweden-Norway.....	10,103	18,318	215,904	8,442
Great Britain.....	295,409	820,844	129,216	380,208
Canada.....	200,422	143,276	1,368	212,310
Mexico.....	1,072	42	.....	.....
Japan.....	2,830	175	85	1,410
Australia.....	.....	.....	560	.....
Other lands.....	442	40	.....	20
<b>Total.....</b>	<b>\$642,093</b>	<b>\$569,698</b>	<b>\$404,586</b>	<b>\$712,935</b>

## EXPORTS OF AMERICAN RUBBER GOODS.

FISCAL YEAR ENDED JUNE 30, 1904.

EXPORTED TO—	Belt, Packing, and Hose.	Boots and Shoes.	Other Goods.	Total Value.
	Pairs.	Value.	Value.	
<b>EUROPE:</b>				
Austria-Hungary	\$ 2,760	617	\$ 684	\$ 7,012
Azores and Madeira	50	1,040	83	1,620
Belgium	3,686	97,626	36,735	76,750
Denmark	3,701	2,410	9,877	28,224
France	5,314	202,349	70,607	138,066
Germany	27,171	102,404	133,704	302,642
Gibraltar	3,440		128	3,578
Greece		600	100	301
Italy	967	26,963	12,508	43,144
Malta, Gozo, etc.			100	100
Netherlands	1,773	5,093	1,586	60,410
Portugal		898	932	46
Russia	3,454	4,571	2,508	2,662
Spain	37	107,704	44,697	8,430
Sweden and Norway	5,780	75,429	34 44	10,656
Switzerland	942	6,512	2,566	507
Turkey in Europe		113,622	42,123	403
United Kingdom	110,983	766,875	316,234	907,475
<b>Total, Europe</b>	<b>\$180,048</b>	<b>1,735,563</b>	<b>\$750,906</b>	<b>\$1,291,554</b>
<b>NORTH AMERICA:</b>				
Bermuda	\$ 1,408	24	\$ 12	\$ 1,866
British Honduras	463		279	712
Nova Scotia, New Bruns.	10,282	27,063	28,557	8,460
Quebec, Ontario, Manitoba	80,628	44,256	47,721	556,277
British Columbia	26,465	13,041	22,886	15,994
Newfoundland, Labrador	6,051	10,394	20,182	2,108
Costa Rica	3,760	182	87	4,369
Guatemala	4,155	40	11	1,615
Honduras	4,876	36	44	837
Nicaragua	3,812	93	41	1,004
Panama	2,243	62	270	1,732
Salvador	4,721	72	27	733
Mexico	137,608	2,239	1,565	146,712
Miquelon, Langley	264	1,788	2,067	42
West Indies—British	4,393	1,279	788	6,048
Cuba	58,251	2,763	2,980	100,332
Danish	207	117	11	293
Dutch	709	6	27	434
French				111
Haiti	327	46	296	171
Santo Domingo	1,802	10	47	1,722
<b>Total, North America</b>	<b>\$352,345</b>	<b>134,475</b>	<b>\$127,674</b>	<b>\$871,932</b>
<b>SOUTH AMERICA:</b>				
Argentina	\$ 9,110	3,250	\$ 3,221	\$ 10,466
Bolivia				633
Brazil	4,859	3,677	2,252	20,783
Chile	6,384	198	159	5,206
Colombia	8,693	1,862	1,089	6,817
Ecuador	10,915	264	152	1,443
Guiana—British	447	5,280	2,291	672
Dutch	81	7	24	157
Peru	7,253	72	524	6,307
Uruguay	677	606	632	1,504
Venezuela	3,964	187	412	4,631
<b>Total, South America</b>	<b>\$ 52,483</b>	<b>16,206</b>	<b>\$ 10,656</b>	<b>\$ 58,698</b>
<b>ASIA:</b>				
Chinese Empire	\$ 7,725	1,417	\$ 712	\$ 9,552
China—Russian	395			397
East Indies—British India	5,869	640	523	9,735
Sri Lanka	645	36	84	465
Other British				73
Dutch	373			704
Hong Kong	1,450	106,400	3,625	3,160
Japan	40,992	43,434	24,119	84,038
Korea	951	6	4	2,077
Russia, Asiatic	12			12
Turkey in Asia		44,737	16,298	273
All other Asia	17			314
<b>Total, Asia</b>	<b>\$ 58,417</b>	<b>196,292</b>	<b>\$ 74,457</b>	<b>\$110,411</b>
<b>OCEANICA:</b>				
British Australasia	\$ 67,849	189,093	\$104,676	\$ 75,471
French Oceania	4,472	434	165	817
German Oceania	57			178
Philippine Islands	32,835	14,132	4,553	36,402
<b>Total, Oceania</b>	<b>\$105,206</b>	<b>203,659</b>	<b>\$109,544</b>	<b>\$112,808</b>
<b>AFRICA:</b>				
British Africa—West	\$ 985	492	\$ 491	\$ 370
South	128,444	14,177	8,023	21,192
Canary Islands				76
Liberia				5
Portuguese Africa	2,052	70	40	1,789
Turkey in Africa—Egypt	140	9,924	4,573	895
<b>Total, Africa</b>	<b>\$131,621</b>	<b>24,683</b>	<b>\$ 13,127</b>	<b>\$ 24,287</b>
<b>GRAND TOTAL 1904</b>	<b>\$880,010</b>	<b>2,310,808</b>	<b>\$1,086,364</b>	<b>\$2,469,750</b>
Grand Total, 1903	819,985	2,307,401	1,064,491	2,299,875
Grand Total, 1902	634,146	2,294,788	1,046,315	1,781,941
Grand Total, 1901	565,726	1,459,100	724,015	1,727,527
Grand Total, 1900	541,830	767,104	439,746	1,405,212
Grand Total, 1899	(a)	486,586	260,886	1,504,499
Grand Total, 1898	(a)	391,832	224,707	1,499,157
Grand Total, 1897	(a)	366,636	195,499	1,611,646
Grand Total, 1896	(a)	350,713	216,657	1,642,499

(a) Included in "Other Goods" prior to July 1, 1897.

## GENTSCH'S ARTIFICIAL GUTTA-PERCHA.

THE insulating material known as "New Gutta-percha," or "Gutta-Gentsch," has had its first practical application in the United States in consequence of its having received the favorable consideration of the United States army signal service. A cable insulated with "Gutta-Gentsch," ordered by General A. W. Greely, chief of the signal service, and constructed by the Bishop Gutta Percha Co. (New York), has been under test for about four months, between fortifications on Long Island and sound. The cable is one mile in length—single conductor, composed of seven No. 24 B. & S. copper wires, stranded and covered with a seamless layer of Gutta-Gentsch to a diameter of  $\frac{7}{8}$  inch, and served and armored according to general practice. The electrical engineer of the signal corps, in a letter to the patentee, wrote of Gutta-Gentsch: "If the material proves to be as good as all published reports indicate, I have no doubt that the signal service will use a good deal of it in future."

Gutta-Gentsch, the invention of Adolf Gentsch, of Vienna, first came into notice as the result of exhaustive experimenting by the German telegraph department, which led to the acquiring of the German patents, in March, 1901, by the Felten & Guillaume Carlswerk Actiengesellschaft (Mülheim). The government first ordered a four-conductor cable nearly 6 miles in length, to connect the island of Föhr with Schleswig, with such results that further orders were placed with the Mülheim firm. There are now in use by the German telegraph department, 15 miles of cables insulated with Mr. Gentsch's material. The Danish government has recently placed with the Mülheim works an order for about 25 miles of submarine cable insulated with the Gentsch material. Messrs. Felten & Guillaume have since acquired the Gentsch patents for Austria-Hungary, erecting a special factory for supplying the material in that country, and, still later, the patents for Russia, where also a small plant has been erected for manufacturing. The use of the new material, however, has been by no means confined to submarine cable work; it has been used for insulation purposes generally by the company referred to.

The patents for Great Britain and the British possessions have been acquired by the New Gutta Percha Co., Limited (London), which had a paid up capital one year ago of £112,500, and at the second annual meeting of which favorable reports were made. The object of the British company, at first, was the production of the new material for the trade, but they are now laying down plant at Greenwich for the manufacture of insulated wires and cables. There is now being formed a company subsidiary to the English corporation, to control the Gentsch patents for southern Europe. The American patents have not yet been exploited.

The new material was described at some length in THE INDIA RUBBER WORLD of September 1, 1902 (page 385), and October 1, 1902 (page 9). Briefly stated, it is a mixture, with India-rubber, of vegetable waxes specially treated to raise their melting point to that of rubber. Tests that have been made indicate that the product is equal to natural Gutta-percha for electrical uses, while the cost is claimed to be much less. The United States patents granted to Mr. Gentsch are: No. 657,696 (September 11, 1900), "Process of raising the melting point of resins, waxes, and similar bodies"; No. 699,383 (May 6, 1902), "Insulating composition and method of producing same."

While reference is made above only to insulation work as affording a field for the use of Gentsch's compound, experiments have been made which, it is asserted, indicate its value in other work, as a substitute for India-rubber or Gutta-percha. It has been tried also in compounds for uses in place of hard rubber.



## NEWS OF THE AMERICAN RUBBER TRADE.

## BOSTON BELTING CO.

AT the annual meeting, on November 29, Edwin A. Hildreth and Francis H. Stevens were elected directors, to succeed James Pearce, deceased, and George A. Miner, resigned. The directors have declared the regular quarterly dividend of 2 per cent., payable January 2, to shareholders of record December 15.

## THE FISK RUBBER CO.

THE Eastern selling office of this company has been removed from Chicopee Falls, Massachusetts—where the factory is located—to New York city. The location is Nos. 754-756 Seventh avenue, where premises have been rented, 30 × 75 feet, and attractive offices furnished for the Eastern department, together with the New York local branch. Mr. J. W. Bowman, the company's manager of sales, took charge of the new offices about the middle of December. The manager of the New York local branch is Mr. E. A. Hoffman.

## A HARTFORD BRANCH AT LOS ANGELES.

THE business conducted hitherto as the Harrison-Williams Rubber Co. (Los Angeles, California), dealers in rubber tires, with an extensive repair shop, has been purchased by The Hartford Rubber Works Co., who will continue it as their Los Angeles branch. It is understood that H. O. Harrison, president of the corporation as formerly constituted, will remain in charge.

## THE SWEET TIRE AND RUBBER CO. (BATAVIA, N. Y.)

THIS company was referred to lately as having about 60 men on its pay roll, and running the factory 15 hours per day. There were orders in hand for six months' work, and if the business continued to increase, additional plant would be needed. The company had installed machinery for making vehicle tires in lengths of 500 feet, and were manufacturing pump valves to order. The output of the factory during November, 1904, is reported to have been seven times larger than for the same month one year ago. Shipment was made during the first week in December of a carload of tires to the Pontiac Spring and Wagon Works (Pontiac, Michigan), the same being sufficient for equipping 1500 carriages.

## WEST COAST RUBBER CO. IN BANKRUPTCY.

A PETITION in voluntary bankruptcy of the West Coast Rubber Co. (San Francisco) was filed in the California superior court on November 22. The petition was signed by J. H. Bennett, president, and H. W. Goodall and Edwin T. Cooper, directors. It recited that the company's insolvency was due to the manner in which its business had been conducted by George Fredericks, who was president of the company for two years, up to October 15 last. The assets are said to be \$50,150.73 and the liabilities \$72,184.81. The court granted the petition and named December 1 as the date for creditors to prove their claims and choose an assignee. At this meeting Don A. Sutherland was agreed upon, after which he was appointed assignee by the court, under bonds of \$100,000. —On October 11 George Fredericks, as president of the West Coast Rubber Co., filed a suit in the superior court at San Francisco to enjoin the other directors—named above—from deposing him from his office; also, to have his rights defined as to certain shares of the company's capital, held by him in conjunction with H. W. Goodell. This did not prevent Fredericks from being deposed as president, however, and on November 14 he sued the company for

more than \$23,000 money advanced, and for services rendered, and had a writ of attachment issued for all its property. —The company had a small factory in San Francisco, for molded rubber work, besides selling a general line of rubber goods.

## THE GUTTA PERCHA COMPANY IN VANCOUVER.

THE Gutta Percha and Rubber Manufacturing Co. of Toronto, Limited, have taken warehouse premises at No. 160 Hastings street, Vancouver, British Columbia, and will carry there a large and complete stock of their manufactures, including rubber boots and shoes and mechanical goods. The establishment will be run as a branch of the company, and will be under the management of Mr. A. G. McKenney, who has been in the employ of the company for twelve or fifteen years, and who for the past five or six years has spent most of his time in British Columbia looking after the interests of the company in that territory. Mr. McKenney is therefore well known to the rubber purchasing trade in British Columbia, and well posted in its requirements. The stock for the Vancouver branch was shipped forward with a view to the premises being open for business on or about January 1.

## MERCHANTS' RUBBER CO., LIMITED (BERLIN, ONT.)

IN response to an announcement in the Berlin newspapers that the factory of this company would be open to the public on November 10, more than 1100 persons witnessed on that day the processes of converting crude rubber into rubber boots and shoes. During the day the entire factory was running as usual, in all departments, and all employes were required to turn out the customary amount of work. They all cheerfully assisted in making the day a great success. The company was organized as late as June, 1903, and, at the date above mentioned, the factory had been in operation only about eight months. The total number of employes was then 140, and the daily production 1500 pairs. Each visitor received a souvenir in the shape of a badge, to which was attached a miniature rubber boot.

## OIL-PROOF MECHANICAL RUBBER GOODS.

THE United States Chemical Rubber Co., a newly incorporated Chicago concern, advise THE INDIA RUBBER WORLD that they will place upon the market an oil-proof line of mechanical rubber goods, for use in situations where the rubber is likely to be exposed to oil and grease. They say: "Our main lines will be packing and belting, and from present indications we will have a larger demand from oil companies alone than we can fill for some time to come." Articles of incorporation of the above company were filed with the recorder of deeds at Washington, D. C., August 15, 1904, the capital stock being stated at \$200,000. Officers: D. Nettenstrom, president; H. L. Walker, vice-president; John R. Nettenstrom, secretary and treasurer. Address: No. 109 South Jefferson street, Chicago.

## EUREKA FIRE HOSE CO.'S EMPLOYEES.

THE annual ball and reception of the factory employes of the Eureka Fire Hose Co. (New York) was held on the evening of December 2 at Greenville, New Jersey, in Columbia Hall, which had been tastefully decorated for the occasion, and was attended by about 1200 persons, including employes and their guests. Among the guests were the Hon. Mark M. Fagan, mayor of Jersey City; the Hon. John Brennan; Fire Commissioners Joseph Zumbusch, Richard F. Connely, and Henry Z. Niblett, and C. J. Esterbrook, clerk of the board of fire commis-

sioners of Jersey City. The Eureka company was represented by Vice President Benjamin L. Stowe, Treasurer George A. Wies, Secretary Isaac B. Markey, and W. H. Payne, the company's representative at Atlanta, Georgia. A fine collation was served and the entertainment was in every way successful.

#### MADISON SQUARE AUTOMOBILE SHOW.

THE fifth annual automobile show, under the auspices of The Automobile Club of America and the National Association of Automobile Manufacturers, at Madison Square Garden, New York, will open on Saturday night, January 14, and continue for one week. On December 17, James C. Young, manager of the Garden, reported that "every available inch of space" had already been taken. Enough applications had been received, he said, to occupy a building three times the size, but manufacturers had to be content with the allotment made by the committee of arrangements. About 250 concerns will exhibit automobiles or accessories, including, as usual, the leading manufacturers of rubber tires. A number of foreign cars will be exhibited in the Garden, notwithstanding the special exhibit to be made at the same time, at Herald Square, by the importers of foreign vehicles.

#### THOMAS TAYLOR & SONS (HUDSON, MASS.)

THOMAS TAYLOR, JR., died at his home in Hudson, Massachusetts, on December 13, aged 28 years. He was associated with his father, Thomas Taylor, and his brother, Frank Taylor, in the firm Thomas Taylor & Sons, manufacturers of elastic shoe goring and elastic webbing. On account of the death of Mr. Taylor the firm name may be changed, though this question has not been decided. The business has been located in Hudson since 1889, after having been conducted at Easthampton, Mass. The senior member of the firm formerly owned and operated the Vale Mills, Derby, England, in the same business, in which he has over 40 years' experience.

#### SQUIRES'S DENTAL RUBBER.

ARTHUR C. SQUIRES (Akron, Ohio) has entered into a contract with The B. F. Goodrich Co. for the manufacture of his "Quick Curing" dental rubbers, during the tenure of the patent on the same. He has also made a contract with Lee S. Smith & Son (Pittsburgh, Pennsylvania), who become sole agents for these goods, for the same length of time. The parties who projected the Akron Dental Rubber Manufacturing Co., for the purpose of manufacturing Mr. Squires's compound, have abandoned the same, not having been able to secure the capital which they expected.

#### GOOD WEATHER FOR THE TRADE IN RUBBERS.

Two weeks ago it was stated that "two-thirds of the average winter snowfall in New York we have already had since the present winter began." The record for the remainder of the snow belt of the United States also shows more than the usual precipitation to date, which is a most favorable indication for the rubber footwear trade. The assertion often has been heard in former years, that a given depth of snowfall before January 1 was worth as much to the rubber shoe industry as twice the amount later in the winter. It would seem that no occasion exists for complaint on this score this season, besides which, apparently a greater proportion of New Yorkers are wearing rubbers this year than at any time formerly. Evidently the various substitutes for rubber footwear—such as "waterproof" leather shoes—have not justified the promises made for them.

#### A DEMAND FOR CLEANER CHICLE.

JOHN COLGAN, president of the Colgan Gum Co. (Louisville, Kentucky), has made a complaint to the customs authorities in that city that the gum Chicle on which he pays an import duty of 10 cents a pound includes a large percentage of bark, stones,

and other entirely worthless material, and requested that the matter be referred to the secretary of the treasury in Washington, in order that some provision may be made for cleaning the Chicle before the duty is levied. Another chewing gum factory in Louisville is owned by the American Chicle Co., which has also a factory in Canada, and a local newspaper mentions that much of the Chicle bought by the American Chicle Co. is first received in Canada and cleaned before it arrives in the United States. At present there is no provision in the United States customs regulations for making allowance for the adulteration of Chicle before levying duties.

#### NEW YORK STOCK EXCHANGE TRANSACTIONS.

##### UNITED States Rubber Co.:

DATES.	COMMON.			PREFERRED.		
	Sales.	High.	Low.	Sales.	High.	Low.
Week ending Nov. 26	12,050	34 <sup>1</sup> / <sub>2</sub>	32 <sup>1</sup> / <sub>8</sub>	8,105	91 <sup>1</sup> / <sub>4</sub>	88
Week ending Dec. 3	5,100	34 <sup>3</sup> / <sub>8</sub>	33	8,040	93	91
Week ending Dec. 10	14,550	33 <sup>3</sup> / <sub>4</sub>	27 <sup>7</sup> / <sub>8</sub>	4,400	93 <sup>1</sup> / <sub>2</sub>	89
Week ending Dec. 17	5,050	32 <sup>1</sup> / <sub>2</sub>	29 <sup>7</sup> / <sub>8</sub>	4,600	93 <sup>1</sup> / <sub>2</sub>	90 <sup>1</sup> / <sub>4</sub>
Week ending Dec. 23	1,300	32 <sup>3</sup> / <sub>4</sub>	32 <sup>1</sup> / <sub>4</sub>	3,500	94 <sup>1</sup> / <sub>2</sub>	93

##### PREFERRED STOCK, \$23,525,500.

Last Dividend, December 13, 1904—1<sup>1</sup>/<sub>2</sub>%

	1900.	1901.	1902.	1903.	1904.
Highest price.....	104 <sup>3</sup> / <sub>4</sub>	85	64	58	91 <sup>1</sup> / <sub>2</sub>
Lowest price.....	77 <sup>1</sup> / <sub>4</sub>	47	49 <sup>1</sup> / <sub>2</sub>	30 <sup>1</sup> / <sub>4</sub>	41 <sup>1</sup> / <sub>8</sub>

##### COMMON STOCK, \$23,666,000.

Last Dividend, April 1, 1904—1%.

	1900.	1901.	1902.	1903.	1904.
Highest price....	44	34	19 <sup>1</sup> / <sub>2</sub>	19 <sup>1</sup> / <sub>8</sub>	34 <sup>3</sup> / <sub>8</sub>
Lowest price.....	21	12 <sup>1</sup> / <sub>2</sub>	14	7	10 <sup>1</sup> / <sub>2</sub>

##### RUBBER Goods Manufacturing Co.:

DATES.	COMMON.			PREFERRED.		
	Sales.	High.	Low.	Sales.	High.	Low.
Week ending Nov. 26	3,900	24 <sup>1</sup> / <sub>2</sub>	23 <sup>1</sup> / <sub>8</sub>	750	87 <sup>3</sup> / <sub>4</sub>	87
Week ending Dec. 3	25,850	23 <sup>1</sup> / <sub>4</sub>	24	3,498	98	88
Week ending Dec. 10	35,919	20 <sup>7</sup> / <sub>8</sub>	24 <sup>1</sup> / <sub>4</sub>	2,231	97 <sup>1</sup> / <sub>2</sub>	90
Week ending Dec. 17	10,100	28	25 <sup>1</sup> / <sub>2</sub>	650	95	92
Week ending Dec. 23	2,350	27	26	560	94	93 <sup>1</sup> / <sub>2</sub>

##### PREFERRED STOCK, \$8,051,400.

Last Dividend, December 13, 1904—1<sup>1</sup>/<sub>2</sub>%.

	1901.	1902.	1903.	1904.
Highest price.....	90	74	64 <sup>1</sup> / <sub>2</sub>	98
Lowest price.....	65	63	60	72 <sup>3</sup> / <sub>8</sub>

##### COMMON STOCK, \$16,941,700.

Last Dividend, July 15, 1901—1%.

	1901.	1902.	1903.	1904.
Highest price....	38 <sup>1</sup> / <sub>4</sub>	25 <sup>3</sup> / <sub>8</sub>	30	29 <sup>7</sup> / <sub>8</sub>
Lowest price.....	18	17 <sup>1</sup> / <sub>4</sub>	12	14 <sup>1</sup> / <sub>2</sub>

#### SKIRM V. EMPIRE RUBBER MANUFACTURING CO.

THE jury in *re* William H. Skirm, Jr., v. Empire Rubber Manufacturing Co., in the United States court at Trenton, New Jersey, on December 14, returned a verdict in favor of the plaintiff for \$419.14, the amount of salary claimed to be due and unpaid, but denied the claim of Skirm for something like \$10,000, in respect of certain stock in the company and the dividends accruing thereon. The claim for salary due was not contested by the company. Further details regarding the suit appeared in THE INDIA RUBBER WORLD, August 1, 1904—page 394. At the trial, counsel for the Empire company argued that when the present owners of the company came into control, not knowing of a certain contract which existed with Edward F. O'Brien, the plaintiff, who had been an officer of the corporation, admitted fault in making the contract, and agreed



to surrender his shares in the company as his share in closing said contract.

#### THE CRUDE RUBBER SUPPLY IN COLORADO.

THE latest news from Colorado is that the work of setting up a rubber extraction plant in the town of Salida was begun on the morning of December 15, by the Salida Crude Rubber Co. The machinery arrived the night before, and the new mill was to be in operation within 15 days. This announcement differs from those coming from Colorado hitherto, since they promised that mills would be in operation within 60 days. It is to be presumed that announcements will next be in order of mills to be in operation the day before.

#### DEATH OF THOMAS J. SHEEHAN (MALDEN, MASS.)

THOMAS J. SHEEHAN died at his home in Malden, Massachusetts, on December 23, of pneumonia, in his forty-ninth year. He was born in Malden, and after leaving school was employed as a cutter in the local rubber shoe factory, after which he became successively foreman for a rubber company in Long Island (New York), and superintendent of the Niagara Rubber Co., of Niagara Falls. When the Concord Rubber Co. began operations at Concord Junction, Massachusetts, he assumed control of the company, being also one of the largest shareholders in the corporation.

#### TRADE NEWS NOTES.

VOORHEES Rubber Manufacturing Co. (Jersey City, New Jersey,) announce that they were awarded a gold medal for their mechanical rubber goods, at the St. Louis World's Fair, and the highest award for rubber belting. A view of their exhibit was given in THE INDIA RUBBER WORLD, October 1, 1904 (page 27.)

=The regular semi annual dividend of 3 per cent. on the preferred shares of the Boston Woven Hose and Rubber Co. was payable on December 15.

=The Hood Rubber Co. (Boston) have declared a regular quarterly dividend of 2 per cent., payable December 15.

=Notices were posted at the factories of the Boston Rubber Shoe Co., at the beginning of December, announcing a nine hour day, instead of ten hours.

=Mr. D. Lorne McGibbon, general manager of The Canadian Rubber Co. of Montreal, last month made his annual visit to the branches and agencies of this company. These extend from Halifax, on the Atlantic seaboard, to Vancouver, on the Pacific, and necessitate several thousand miles of varied travel. During his western trip Mr. McGibbon opened an extensive sales branch at Calgary, in the North West territories.

=Anything seems possible, to some people, in connection with automobile tires. The Middletown (Connecticut) Press says: "The Hartford Rubber Works Co. is to present each of its 1000 employes with a turkey. No distinction is to be made between married or single employes, male or female. All are to receive a bird, and it is going to cost the company \$3000; but then that amount is small when you take into consideration that the concern is making automobile tires."

=The Bridgeport (Connecticut) Elastic Fabric Co. are roofing in the brick addition which has been constructed at the rear of their plant on Center street.

=A contract is reported for a building to be constructed by the G. & W. A. Elliott (Minneapolis, Minnesota), on Sixth street, near Second avenue, south, in that city, to cost \$5000 and to be occupied by the Hartford Rubber Works Co.

=Mr. Charles P. Kelly, for many years manager of molded goods and kindred lines with Morgan & Wright (Chicago), has now taken up a similar position with The Canadian Rubber Co. of Montreal.

=The Republic Rubber Tire and Shoe Co. (New York), incorporated under the laws of New York state something over a year ago, have built up a large business in repairing pneumatic automobile tires of leading makes. They have acquired United States patent No. 717,263, granted to H. R. Palmer, for flexible protectors (of leather or rubber) for rubber tires, and it is understood have issued a notice cautioning other parties against infringing said patent. The manager of the business is Frederick E. McEwen, who has been connected with the vehicle tire trade for a number of years.

=Harry Wagner has been appointed an assistant superintendent of the Woonsocket Rubber Co., to have charge of their factory at Millville, Massachusetts, dating from January 1. For five years Mr. Wagner has been in the employ of the Apsley Rubber Co. (Hudson, Mass.) and prior to that time was with the National India Rubber Co. (Bristol, R. I.).

=Hirsch & Kaiser, Inc. (New York), advise THE INDIA RUBBER WORLD that they have opened a store at Nos. 230-232 Purchase street, Boston, where they will carry a line of foreign and domestic skins, pelts, and wool. They will also handle Mangabeira and Maniçoba rubber, and sundry other South American products.

=The Canadian Rubber Co. of Montreal are publishing a new Mat and Matting catalogue. All the cuts will be in half-tone, and the catalogue will be gotten out in a very handsome manner. A Tiling catalogue and several other attractive rubber booklets are also in course of preparation by this progressive Canadian company.

=Coupons due January 1 on the 6 per cent. first mortgage gold bonds of the Mechanical Rubber Co. are payable on presentation at the office of the Knickerbocker Trust Co., No. 66 Broadway, New York. Coupons due on the same date on the 6 per cent. mortgage debenture bonds of the New York Belting and Packing Co., Limited, are payable at the same place.

=The employees of the Apsley Rubber Co. (Hudson, Massachusetts), on the evening of December 3, presented President L. D. Apsley with a beautiful silk banner, lettered with gold, on which was expressed their appreciation of his Thanksgiving Day remembrance of the whole factory force.

=Mr. W. H. Adams, formerly Boston agent of the Eureka Fire Hose Co., and recently with the Standard Brazing Co. (Boston), has accepted a position with The Canadian Rubber Co. of Montreal, as manager of the company's extensive fire hose and fire department supply business.

=The new factory building of the Hope Webbing Co. (Pawtucket, Rhode Island) presents an interesting application of the fan system of heating and ventilation. In connection with an old building, and contemplated additions, the contents amount to about 875,000 cubic feet. In this installation, made by the B. F. Sturtevant Co. (Hyde Park, Massachusetts), the distributing ducts occupy no valuable space, since the heated air is forced through an underground system into vertical flues, which are built into the brick walls. From these flues the air is admitted in the usual manner. By this arrangement all the heating surface is concentrated in a single fireproof casing in connection with the fan, and there is eliminated from the building all extended systems of steam piping.

=The Pope Bicycle Daily Memorandum Calendar for 1905 contains a memorandum leaf for every day in the year, and 365 original sayings in favor of good roads, good health, outdoor exercise, and that great vehicle of health-giving, the modern bicycle, by our most eminent living men of marked accomplishment. The calendar may be obtained by sending 10 cents in postage to the Pope Manufacturing Co. (Hartford, Connecticut), or free at any of the company's stores.

=The employes of the shipping room of the Boston Rubber Shoe Co. (Malden, Massachusetts), on the evening of December 2, enjoyed a concert and dance organized by a committee of their department, which was attended by about 125 couples.

=Mr. Harrison C. Frost, formerly of the Revere Rubber Co., and one of the best known rubber men in the United States, is now with The Canadian Rubber Co. of Montreal, as manager of the extensive mechanical goods department of this company.

=The business of Thomas E. Greacen, wholesale boots, shoes, and rubbers, No. 144 Duane street, New York, has been merged into that of Morse & Rogers, No. 134 Duane street. Mr. Greacen, who entered the wholesale trade in 1871, will be a shareholder in the corporation of Morse & Rogers, but will have no active part in the management.

=Progress is reported in the organization of the company mentioned in the last INDIA RUBBER WORLD as being formed at Lawrence, Massachusetts, for the manufacture of rubber footwear. The parties interested are not yet in a position to make any public announcement, but it is understood that machinery is being installed in the premises in Lawrence sometime occupied by the American Woolen Co.

=Mr. F. X. Pund has retired as vice president and withdrawn from The Queen City Supply Co. (Puchta, Pund & Co.), of Cincinnati, Ohio, disposing of his interest to Mr. George Puchta, under whose management as president the business will be continued as heretofore.

=Mr. E. H. Paine, manager of sales of the United States Rubber Co., gave a dinner to the selling agents of the company on the evening of December 21, at the Hotel Astor, New York. It was a delightful dinner, handsomely served, and thoroughly enjoyed. The president of the company, Colonel Samuel P. Colt, was the guest of honor, and in an after-dinner talk gave the guests an encouraging statement of the condition of the company's affairs.

=Up to the time of going to press with this issue no news has been received at New York of the arrival at Pará of Commodore E. C. Benedict and party, whose sailing from New York on the steam yacht *Virginia* was reported in the last INDIA RUBBER WORLD.

#### THE MUNFORD RUBBER TIRE CO. GOES TO LAW.

TWO suits were filed in the United States circuit court at Cincinnati, Ohio, on December 24, by The Munford Rubber Tire Co., of Atlanta, Georgia, in which the defendants named are rubber tire manufacturers. The Munford Rubber Tire Co., by the way, succeeded at one time to the interests of The Finley Rubber Tire Co., of Atlanta, selling agents originally of the Rubber Tire Wheel Co., who were then owners of the Grant patent for solid rubber tires. The result of some former litigation in which The Munford Rubber Tire Co. was involved was reported in THE INDIA RUBBER WORLD July 1, 1902 (page 320), a decision having been rendered in the United States circuit court at Atlanta sustaining—in that jurisdiction—the Grant patent. The first of the two new suits alleges a violation of the Sherman anti-trust act, which was recently construed in a decision of the United States supreme court in the celebrated Northern Securities case. There are named as defendants the Rubber Tire Wheel Co. and ten manufacturing companies engaged in the production of rubber tires, it being alleged that they formed a combination illegal under the Sherman act by controlling the supply and raising the prices of rubber tires in restraint of trade among the several states. The combination referred to evidently is that made under the license agreement of September 1, 1903, which came to an end within one year from that date. The second of the suits by the Munford com-

pany is directed against the Rubber Tire Wheel Co., an Ohio corporation, and the Consolidated Rubber Tire Co., a New Jersey corporation, doing business in Ohio, and claims damages in the sum of \$72,000 for alleged breach of contract. It is claimed that the defendant companies made large sales of their tires in the district which was reserved to the Munford company as their selling agents.

#### THE NEW RUBBER SHOE PRICES.

THE United States Rubber Co. have issued their lists for the season of 1905, to take effect from January 2. This is the usual season for the issue of these lists, though last year they were delayed until February 1, on account of the uncertainty at the beginning of the year in the crude rubber market. It cannot be said that the crude rubber market is now devoid of uncertainty, but it is to be presumed that the new policy of the company in relation to covering their requirements in rubber well in advance has rendered them more independent than formerly of fluctuations in prices. Without going into detail, it may be stated that the new lists are practically without change from last year, except that in a few items of men's boots, perfections lumbermen's goods, and some other heavy goods, a reduction has been made—generally about 20 cents per pair. The printed discount sheet repeats the figures which have been in effect since June 1, 1904, these being the figures intended to serve for the whole year. Contracts with jobbers, however, allow an extra 5 per cent. discount for early orders, in keeping with the policy of the company for several years past. The discounts to retailers are as follows:

First quality (except Woonsocket and Meyer) .....	25 @ 3
Woonsocket and Meyer brands.....	25 @ 5 @ 3
Second quality (except Rhode Island).....	25 @ 10 @ 3
Rhode Island brand .....	25 @ 10 @ 5 @ 3
Colonial brand.....	Net prices.

Catalogues and price lists have been received for the following constituent companies of the United States Rubber Co.:

American Rubber Co.....	Cambridgeport, Mass.
Boston Rubber Shoe Co .....	Boston, Mass.
L. Candee & Co.....	New Haven, Conn.
Goodyear's India-Rubber Glove Manufacturing Co.....	New York.
Jersey Rubber Co.....	New Brunswick, N. J.
Meyer Rubber Co.....	New Brunswick, N. J.
Wales-Goodyear Shoe Co.....	Naugatuck, Conn.
Woonsocket Rubber Co .....	Woonsocket, R. I.

Separate lists have been received of the "Connecticut" and "Rhode Island" brands and also the "Unlisted List," covering a number of specialties marketed by the United States Rubber Co.

#### MECHANICAL RUBBER GOODS PRICES.

ALTHOUGH the question of making an advance on mechanical rubber goods has been discussed to a considerable extent of late, it does not appear that any concert of action has been agreed upon by the manufacturers in this field. Some of the manufacturers during the month have withdrawn all former quotations, as preliminary to making an advance to be determined by the necessities of the situation, but no special rate of advance seems to have been made even by these firms. Certain other firms report that, in view of advances made some months ago, they do not feel any necessity at present for making another advance.

#### PERSONAL MENTION.

DR. ALBERTO PIRELLI of Milan, Italy, whose visit to the United States was reported recently in these columns, writes to THE INDIA RUBBER WORLD from Manáos, Brazil, near which place he has been observing the processes of producing crude rubber. He expected to return to Italy in December.



=Mr. Rudolph Zeitz, after spending the past two years in New York, returned recently to Pará, where he was engaged in business for many years, and where it is understood that he will again become connected with the rubber trade.

=The London *Standard* of December 5 published a despatch from St. Petersburg with reference to the presence in Moscow, during the preceding week, of Mr. Charles Ranlett, who was supposed to be Charles Ranlett Flint, of New York, visiting Russia in connection with the sale to the government of certain Argentine and Chilean warships. On leaving Moscow he started for Constantinople, via Warsaw and Odessa. Later (December 8) Mr. Flint was reported to be in Constantinople negotiating the sale of pneumatic guns to Turkey, and a St. Petersburg despatch stated that Russia had bought no South American warships.

=Mr. James N. Babcock, of the freight department of the Boston Rubber Shoe Co., is receiving congratulations on the announcement of his engagement to Miss Clara N. Frost, of Malden, Massachusetts.

#### AMERICAN RUBBER SHOES ABROAD.

EXPORTS of rubber footwear from the United States during the first eleven months of six years past have been officially stated as follows:

	Pairs.	Value.
1899 .....	542,042	\$ 286,713
1900 .....	1,133,473	593,664
1901 .....	2,094,501	840,971
1902 .....	2,138,221	958,085
1903 .....	1,942,845	890,835
1904 .....	2,120,527	1,089,215

#### RUBBER REGULATIONS ON THE CONGO.

[FROM "LA CHRONIQUE COLONIALE," BRUSSELS.]

THE Congo Free State has just extended the decrees of October 30, 1892; January 5, 1899; and June 7, 1902, as well as the resolutions adopted March 22, 1899, and June 18, 1902, thereby applying them to the entire territory of the domain. These are the legislative measures taken for the purpose of preventing the decrease in the supply of rubber from the forests.

A new decree, issued on September 22, 1904, has gone into effect, whereby whosoever gathers rubber in the forests or from grounds belonging to the domain, either for his own account or for the account of others, shall be compelled to annually plant in such forests or on such grounds a number of rubber trees or *lianes* (creepers) not less than 50 for rubber gathered from trees or *lianes*, and not less than 15 for rubber called

*des herbes*,\* for each 100 kilograms or fraction of 100 kilograms of fresh rubber gathered therefrom within the same period.

Those who are not natives are responsible for the carrying out of the above mentioned obligations by the natives who furnish them the rubber, in whatever capacity they may be considered.

The government agents in such parts of the domain in which the state has not given up the exploitation of the rubber, as well as the private parties or holders of concessions and their agents, in such parts of the domain in which the state has ended the exploitation, are obliged to do the amount of planting as stated above, and to care for the plants, and they must act in accordance with the conditions and terms which are specified in the executive clauses of the decree, the principal stipulations of which we recapitulate below.

The rubber from trees or *lianes* must be gathered only by tapping (incisions.)

The cutting down of rubber trees or *lianes*, to remove the bark, and the extraction of rubber from trees or *lianes* by means of beating or crushing, or by any means other than that prescribed in the first paragraph of this section, is prohibited.

Infractions of this decree, or of the resolutions adopted for its execution are punishable by a fine varying from 100 to 5000 francs, and by hard labor for 10 days to six months, or by either one of these penalties.

The masters or employers, or, where firms or corporations are concerned, their representatives in the Congo, as well as the agents of the government, shall, under the conditions of the executive resolutions, be punishable to the amount of the above mentioned fines, if they do not take due care to see to the strict carrying out by their officials or by their subordinates of the legal requirements in regard to the planting of rubber trees and *lianes*, and to their maintenance, or of the prohibitive clauses contained in the decree.

\* "Root rubber." See THE INDIA RUBBER WORLD, May 1, 1903 (page 211).

#### AMAZON STEAM NAVIGATION CO.

TO THE EDITOR OF THE INDIA RUBBER WORLD: The directors of the Amazon Steam Navigation Co., Limited, at their meeting to-day, declared a half yearly dividend on account of the current year of 2 per cent., or 5 shillings per share free of income tax, payable on and after January 10, 1905. Also that the transfer books of this company will be closed from December 21, 1904, to January 6, 1905, both days inclusive.

G. STREET & CO., LIMITED.

London, December 11, 1904.

#### REVIEW OF THE CRUDE RUBBER MARKET.

THE highest value for rubber in the history of the New York market was reached on November 26, when the cost of import of Manáos fine was \$1.32 per pound, net.

Speedily following this date a decline in values was cabled from Amazon ports. An important decline was established during the week ending December 10, when purchases were made at Manáos which would give a cost of \$1.16¼ net, landed New York, for Upriver fine, and other grades in proportion. By December 15 an advance had been made for rubber of the same grade to \$1.22, and during the week ending December 24 there were large transactions on the basis of \$1.26, net, New York. The highest sales made during December of Upriver fine spot were at \$1.30 and the lowest at \$1.20. For future delivery, January to March, sales were made of Upriver fine at \$1.50, net, for

quantity, without brokerage. At the close of the month a lower market was reported at both Pará and Manáos. The demand for the close of December is very moderate, as this is the period for stocktaking in many factories, besides which the principal consumers appear to be supplied with Pará rubber for immediate use, and are now only interested in future delivery values.

The weather conditions have been favorable for the demand for rubber footwear to an extent almost unprecedented, pointing perhaps to the largest consumption of rubber in this branch ever known—a condition which, in connection with slighter receipts of rubber thus far for the season, does not encourage any hope of substantially lower prices soon for crude rubber.

Rubber imports into the United States for the first eleven

months of three years past have been as follows, officially stated:

	1902.	1903.	1904.
Pounds.....	46,007,428	50,868,845	55,560,506
Value.....	\$22,568,786	\$31,960,432	\$38,506,882

Arrivals at Pará (including Caucho), at last advices, compare with the same months of previous years as follows:

	1901.	1902.	1903.	1904.
July.....	1260	1290	1280	1240
August.....	1290	1370	1230	1250
September.....	1940	1670	2010	1810
October.....	2640	2280	2440	2460
November.....	2970	2650	2980	2800
December.....	3530	2990	3530	2910

Total, six months..... 13,630 12,250 13,470 12,470  
[a To December 31, 1904.]

Following is a statement of prices of Pará grades, one year ago, one month ago, and on December 30—the current date.

PARÁ.	Jan. 1, '04.	Dec. 1, '04.	Dec. 31.
Islands, fine, new.....	90@ 91	125@ 126	114@ 115
Islands, fine, old.....	@	none here	none here
Upriver, fine, new.....	93@ 94	129@ 130	119@ 120
Upriver, fine, old.....	96@ 97	none here	none here
Islands, coarse, new.....	55@ 56	72@ 73	65@ 66
Islands, coarse, old.....	@	none here	none here
Upriver, coarse, new.....	76@ 77	90@ 97	93@ 94
Upriver, coarse, old.....	@	none here	none here
Caucho (Peruvian) sheet.....	61@ 62	71@ 72	69@ 70
Caucho (Peruvian) ball.....	72@ 73	82@ 83	79@ 80

The market for other sorts in New York shows a slighter decline, as follows:

AFRICAN.		CENTRALS.	
Sierra Leone, 1st quality.....	95 @ 96	Esmeralda, sausage.....	80 @ 81
Massai, red.....	95 @ 96	Guayaquil, strip.....	69 @ 70
Benguella.....	71 @ 72	Nicaragua, scrap.....	78 @ 79
Cameroon ball.....	64 @ 65	Panama, slab.....	59 @ 60
Accra flake.....	32 @ 33	Mexican, scrap.....	78 @ 79
Lopori ball, prime.....	98 @ 99	Mexican, siab.....	59 @ 60
Lopori strip, prime.....	93 @ 94	Mangabeira, sheet.....	48 @ 57
Ikelemba.....	99 @ 100	Assam.....	88 @ 89
Madagascar, pinky.....	80 @ 81	Borneo.....	39 @ 40

Late Pará cables quote:

	Per Kilo.		Per Kilo.
Islands, fine.....	6\$100	Upriver, fine.....	7\$650
Islands, coarse.....	3\$100	Upriver, coarse.....	5\$550
Exchange, 13 1/4 d.			

Last Manáos advices:

Upriver, fine.....	7\$250	Upriver, coarse.....	4\$750
Exchange, 13 3/4 d.			

### Statistics of Para Rubber (Excluding Caucho).

NEW YORK.				
	Fine and Medium.	Coarse.	Total 1904.	Total 1903.
Stocks, October 31.....	5	4 =	9	82
Arrivals, November.....	862	423 =	1285	1166
Aggregating.....	867	427 =	1294	1248
Deliveries, November.....	862	425 =	1287	1162
Stocks, November 30.....	5	2 =	7	32

PARÁ.			ENGLAND.		
	1904.	1903.		1904.	1903.
Stocks, October 31.....	165	345		111	435
Arrivals, November.....	2720	2890		994	1035
Aggregating.....	2885	3235		1105	1470
Deliveries, November.....	2345	3040		925	1100
Stocks, Nov. 30.....	540	105		180	370

	1904.	1903.	1902.
World's visible supply, November 30.....	2067	2648	3082
Pará receipts, July 1 to November 30.....	9331	9290	8734
Pará receipts of Caucho, same dates.....	599	594	556
Afloat from Pará to United States, Nov. 30.....	520	1017	710
Afloat from Pará to Europe, November 30.....	820	1034	846

### NEW YORK RUBBER PRICES FOR NOVEMBER (NEW RUBBER).

	1901.	1902.	1903.
Upriver, fine.....	1.16@ 1.31	92@ 1.02	78 @ 82
Upriver, coarse.....	89@ 98	78@ 83	63 @ 68
Islands, fine.....	1.12@ 1.26	90@ 98	73 @ 76
Islands, coarse.....	62@ 73	54@ 58	48 @ 51
Cametá, coarse.....	63@ 72	53@ 55	48 @ 52

### PARITY TABLE OF RUBBER PRICES.

PER POUND.			PER KILO.			PER POUND.			PER KILO.		
CENTS.	S.	D.	FRANCS.	MARKS.		CENTS.	S.	D.	FRANCS.	MARKS.	
65	2	8 1/2	7.40	6.00		95	3	11	10.58	8.80	
70	2	10 1/2	8.00	6.50		100	4	1 1/2	11.83	9.25	
75	3	1	8.55	6.93		105	4	3 1/4	12.60	9.70	
80	3	3 1/2	9.12	7.40		110	4	6 1/4	12.54	10.20	
85	3	5 3/8	9.68	7.85		115	4	8 3/4	13.10	10.63	
90	3	8 3/8	10.26	8.30		120	4	11 1/4	13.68	11.10	

### Rubber Receipts at Manaos.

DURING November and five months of the crop season for three years [courtesy of Messrs. Witt & Co.]:

FROM -	NOVEMBER.			JULY-NOVEMBER.		
	1904.	1903.	1902.	1904.	1903.	1902.
Rio Purús.....	497	512	249	1694	1613	1448
Rio Madeira.....	216	190	240	1249	1208	1134
Rio Jurúa.....	260	468	183	665	882	452
Rio Javary—Iquitos.....	302	304	246	1158	1070	554
Rio Solimões.....	144	123	153	258	306	598
Rio Negro.....	15	32	21	33	49	90
Total.....	1434	1638	1092	5057	5128	4276
Caucho.....	124	44	94	458	472	415
Total.....	1558	1682	1186	5515	5600	4691

### Ceylon Rubber Exports.

DETAILS of shipments of plantation rubber for eleven months, to November 28, 1904:

T -	Pounds.	To	Pounds.
Great Britain.....	55,004	France.....	60
Germany.....	7,221	Holland.....	15
Australia.....	884		
India.....	119	Total.....	63,447
Belgium.....	111	11 months, 1903.....	38,915
United States.....	63		

### Bordeaux.

#### IMPORTS OF RUBBER—JANUARY TO OCTOBER.

	1904.	1903.
January.....	66,864	54,550
February.....	95,007	169,025
March.....	119,582	94,615
April.....	97,641	121,560
May.....	104,098	91,125
June.....	63,473	65,060
July.....	50,215	72,220
August.....	151,110	208,185
September.....	103,450	87,400
October.....	67,850	57,903
Total.....	919,290	1,021,643

### Rubber Scrap Prices.

NEW YORK quotations—prices paid by consumers for carload lots, in cents per pound—show a slight advance over the figures last reported, as follows:

Old Rubber Boots and Shoes—Domestic.....	6 3/8 @ 6 1/2
Do —Foreign.....	5 5/8 @ 5 3/4
Pneumatic Bicycle Tires.....	3 1/2 @ 4
Solid Rubber Wagon and Carriage Tires.....	6
White Trimmed Rubber.....	8 1/2 @ 8 3/4
Heavy Black Rubber.....	4
Air Brake Hose.....	2 1/2 @ 2 3/4
Fire and Large Hose.....	2 @ 2 1/4
Garden Hose.....	1 3/8 @ 1 7/8
Matting.....	3 1/4 @ 4



## London.

EDWARD TILL &amp; CO. [December 1] report stocks:

	1904.	1903.	1902.
LONDON { Pará sorts..... tons —			
{ Borneo..... 30	20	93	
{ Assam and Rangoon..... 4	4	2	
{ Other sorts..... 558	250	230	
Total..... 592	274	325	
LIVERPOOL { Pará..... 178	374	1178	
{ Caucho..... 94	28	38	
{ Other sorts..... 643	509	542	
Total, United Kingdom..... 1507	1185	2083	
Total, November 1..... 1307	1185	2337	
Total, October 1..... 1666	866	2464	
Total, September 1..... 1508	1364	2731	
Total, August 1..... 1764	1781	3053	
Total, July 1..... 1920	2285	3595	
Total, June 1..... 1667	2248	3687	

## PRICES PAID DURING NOVEMBER.

	1904.	1903.	1902.
Pará fine, hard.. 4/11½ @ 5/ 5½ 3/10 @ 4/ 2	3/4½ @ 3/ 6		
Do soft..... 4/11 @ 5/ 4½ 3/ 9 @ 4/ 1	3/ 0¾ @ 3/ 1½		
Negroheads, scrappy. 3/ 9½ @ 3/ 11½ 3/ 3 @ 3/ 4½	2/ 8½ @ 2/ 10		
Do Cametá. 2/ 9½ @ 2/ 10½ 2/ 3½ @ 2/ 5½	2/ 0¼ @ 2/ 1¾		
Bolivian..... No sales 4/ @ 4/ 2	3/4½ @ 3/ 6		
Caucho, ball..... 3/ 5 @ 3/ 6½ 3/ 3 @ 3/ 4¾	2/ 7 @ 2/ 8½		
Do slab..... 2/ 11½ @ 3/ 1 2/ 6½ @ 2/ 9	2/ 3 @ 2/ 3½		
Do tails..... 2/ 8½ @ 3/ 2½ 2/ 10	2/ 4		

DECEMBER 9.—The market for Pará has developed extreme weakness since the beginning of the month, prices showing a decline of about 3d. per pound. A large business has been done, comprising fine hard spot and December delivery down to 5s. 2½d.; January down to 5s. 1d.; February at 5s. 2d. @ 5s. 1¾d.; March 5s. 1½d. @ 4s. 11¾d.; and April 4s. 11¾d. Soft fine also lower, with small sales closing sellers of December delivery at 5s. 1d. Peruvian: Large sales have been made of fine spot and near delivery at 5s. 1½d. @ 5s. 1d. Ball dull, with sellers spot at 5s. 5½d., slab scarce, 2s. 11½d. value. Medium grades have been in fair demand and a good business has been done. At the auctions to-day the fair supplies met little competition and only a small quantity sold at rather easier rates.

DECEMBER 16.—The market for Pará has continued depressed, owing to the pressure to sell by speculators, and prices declined a further 2½d. per pound. Towards the close, however, more firmness has prevailed, and values closed at some recovery. Business in fine hard has been moderate, including spot and near down to 5s., closing 5s. ½d. buyers; January delivery down to 4s. 11½d.; February-March at 4s. 10¼d. @ 4s. 10½d.; and March-April at 4s. 10d. Soft fine: A fair business has been done for January delivery at 4s. 10d.; sport sold at 4s. 11d. @ 4s. 11¼d.

## PLANTATION RUBBER (FROM PARÁ SEED).

November 25 Auction.—Ceylon: 40 packages offered and 28 sold. Fine thin biscuits at 6s. 1d. [= \$1.48]; fair to good scrap at 4s. 6d. to 4s. 9d.; middling scrap at 3s. 6d. to 3s. 10d.; dirty ditto at 3s.

December 9 Auction.—Twenty-eight packages offered and 13 sold. Straits, fine pale and dark biscuits at 5s. 9d.; fine sheet, some dark, at 5s. 9d.; black sheet at 3s. Ceylon, good scrap at 4s. 4¾d.

Also, 26 packages of cultivated Manicoba rubber offered and sold—good thin clean sheet at 4s. 7¾d. @ 4s. 8d.

## Liverpool.

WILLIAM WRIGHT &amp; CO., report [December 1]:

Fine Pará—With heavy American buying in Pará and Manáos, the market has been strong and active, closing with an advance of 5½d. per pound, establishing a new record of 5s. 5½d. [= \$1.32¾] for Upriver fine. At the present stage of the crop, even granting supplies are moderate and that there is no reserve of stock, we see no reason for such extraordinary high prices. How long the Americans intend to keep prices up we cannot say, but there is no doubt that these unnecessarily high rates will tend to curtail consumption.

## Antwerp.

TO THE EDITOR OF THE INDIA RUBBER WORLD: At the monthly inscription sale on December 16 about 646 tons were disposed of, of which 580 tons found purchasers. The market was much firmer than the recent weakness for Pará sorts in the Liverpool markets would have led us to expect. Prices were very irregular, varying from 35 to 40 centimes (about 3 per cent.) below valuations, to 37 centimes above. The average comes out at a fraction above valuations. The United States participated in this result by sending substantial buying orders. Among the principal lots the following may be mentioned:

	Estimations.	Sold at.
40 tons Uelé.....	francs 10.12½	10.22½
16 " Aurwimi (average).....	9.20	9.30
10 " Aurwimi (average).....	9.20	9.02½
14 " Upper Congo fuses.....	8.	9.02½
13 " Equateur (2 tons remainder).....	10.90	10.60
26 " Upper Congo .....	10.75	10.52½
12 " Mongalla .....	10.07½	10.70
8 " Lopori I (average).....	10.90	10.30
28 " Lopori II (average).....	6.85	10.75
		6.75

The result of the sale as a whole may be considered as very satisfactory.

C. SCHMID &amp; CO., SUCCESEURS.

Antwerp, December 16, 1904.

## ANTWERP RUBBER STATISTICS FOR NOVEMBER.

DETAILS.	1904.	1903.	1902.	1901.	1900.
Stocks, Oct. 31.. kilos	710,860	876,637	350,138	266,105	909,047
Arrivals in Nov....	336,701	361,895	235,231	683,521	473,404
Congo sorts.....	267,778	303,453	201,172	660,897	452,315
Other sorts.....	68,923	58,442	34,059	22,624	21,089
Aggregating....	1,047,561	1,238,532	585,360	949,626	1,382,451
Sales in November..	435,835	558,390	399,408	106,325	317,805
Stocks, Nov 30...	611,726	680,142	185,961	843,301	1,064,646
Arrivals since Jan. 1	5,182,012	5,088,325	4,604,740	5,644,282	5,527,900
Congo sorts.....	4,263,232	4,580,456	4,232,804	5,231,931	4,750,277
Other sorts.....	918,780	507,869	371,945	412,351	777,623
Sales since Jan. 1..	5,181,186	5,066,288	4,833,497	5,414,930	4,755,245

## RUBBER ARRIVALS AT ANTWERP.

NOV. 30.—By the *Anversville*, from the Congo:

Bunge & Co..... (Société Générale Africaine) kilos	92,000
Do..... (Chemins de fer Grand Lacs)	18,000
Do..... (Société "La Kotto")	1,000
Do..... (Sultanats du Haut Obangi)	13,000
Société Equatoriale Congolaise.. (Société L'Ikelemba)	2,500
Comptoir Commercial Congolais.....	9,000
Comptoir des Produits Coloniaux.....	
(Ekela Kadei Sangha)	11,500
Cie. Commerciale des Colonies.....	
(Cie. Française du Congo)	5,000
L. & W. Van de Velde..... (Cie. du Kasai)	73,000
Société Coloniale Anversoise..... (La Lulonga)	5,000
Do..... (Belge du Haut Congo)	1,000
Do..... (Cie. de Lomami)	3,500
Do..... (La Haut Sangha)	12,500
Société Générale de Commerce..... (Alimaïenne)	5,500
M. S. Cols..... (Alima)	4,800
	257,300

## IMPORTS FROM PARA AT NEW YORK.

[The Figures Indicate Weights in Pounds.]

December 5.—By the steamer *Amazonense*, from Manáos and Pará:

IMPORTERS.	Fine.	Medium.	Coarse.	Caucho.	Total.
General Rubber Co.....	309,600	52,200	83,200	3,500=	448,500
Poel & Arnold.....	147,300	35,100	81,000	2,600=	266,000
New York Commercial Co.....	105,000	17,400	63,000	500=	185,900
A. T. Morse & Co.....	54,500	11,100	72,400	..=	138,000
Edmund Reeks & Co.....	25,900	5,000	5,800	..=	36,700
Hagemeyer & Brunn.....	10,500	8,800	2,200	..=	21,500
Lionel Hagenaers & Co..	14,000	.....	2,900	..=	16,900

Total ..... 666,800 129,600 310,500 6,600=1,113,500

December 15.—By the steamer *Maranhense*, from Manáos and Pará:

New York Commercial Co.	222,200	42,100	107,700	9,400=	381,400
General Rubber Co.	260,200	35,900	74,500	2,900=	373,500
Poel & Arnold	96,000	10,700	126,300	1,200=	234,200
A. T. Morse & Co.	40,100	6,000	52,900	300=	99,300
Edmund Reeks & Co.	32,300	10,700	17,100	=	60,100
Hagemeyer & Brunn	37,800	2,000	17,500	=	57,300
Lawrence Johnson & Co.	10,300	3,200	2,600	=	16,100
Lionel Hageners & Co.	14,700	.....	1,500	=	16,200

Total. . . . . 713,600 110,600 400,100 13,800=1,238,100

December 27.—By the steamer *Fluminense*, from Manáos and Pará:

General Rubber Co.	208,500	39,600	66,400	1,900=	316,400
New York Commercial Co.	130,100	24,200	125,800	3,400=	284,000
A. T. Morse & Co.	148,200	31,700	53,600	1,900=	235,400
Poel & Arnold	84,300	17,600	86,100	1,900=	191,900
Edmund Reeks & Co.	71,500	11,700	21,600	=	104,800
Thomsen & Co.	18,600	.....	3,200	=	21,800
Lionel Hageners & Co.	11,800	.....	2,400	=	14,200

Total..... 673,000 126,800 359,100 9,600=1,168,500

[NOTE.—The steamer *Panifac*, from Pará, is due at New York on January 1, with 860 tons Rubber.]

## PARA RUBBER VIA EUROPE.

Nov. 29.—By the <i>Armenian</i> =Liverpool:	
Poel & Arnold (Coarse)	7,000
DEC. 2.—By the <i>Cedric</i> =Liverpool:	
Poel & Arnold (Fine)	45,000
Poel & Arnold (Coarse)	7,000
A. T. Morse & Co. (Coarse)	13,000 65,000
DEC. 8.—By the <i>Etruria</i> =Liverpool:	
New York Commercial Co. (Coarse)	30,000
DEC. 7.—By the <i>Georgic</i> =Liverpool:	
Poel & Arnold (Fine)	62,000
DEC. 8.—By the <i>Oceanic</i> =Liverpool:	
Poel & Arnold (Fine)	95,000
DEC. 12.—By the <i>Lucania</i> =Liverpool:	
New York Commercial Co. (Cauchó)	70,000
DEC. 16.—By the <i>Majestic</i> =Liverpool:	
Poel & Arnold (Coarse)	5,500
Poel & Arnold (Fine)	4,500 10,000
DEC. 19.—By the <i>Umbria</i> =Liverpool:	
New York Commercial Co. (Fine)	19,000
New York Commercial Co. (Coarse)	11,000
A. T. Morse & Co. (Coarse)	4,500 34,500

## OTHER ARRIVALS IN NEW YORK

## CENTRALS.

Nov. 26.—By the <i>Philadelphia</i> =London:	
Hirsch & Kaiser	24,000
J. H. Rossbach & Bros.	17,000
Poel & Arnold	2,000 43,000
Nov. 25.—By the <i>Baltic</i> =Liverpool:	
Emile Boris	15,000
Nov. 26.—By the <i>Havana</i> =Mexico:	
H. Marquardt & Co.	500
Graham, Hinkley & Co.	500
L. N. Chemedlin & Co.	500
E. Steiger & Co.	200
For Hamburg	3,000 4,700
Nov. 28.—By the <i>Comus</i> =New Orleans:	
A. T. Morse & Co.	7,000
G. Amsinck & Co.	4,500
Manhattan Rubber Mfg. Co.	2,500
A. N. Rotholz	1,000 15,000
Nov. 25.—By the <i>Graf Waldersee</i> =Hamburg:	
Poel & Arnold	37,000
Nov. 30.—By the <i>Alliance</i> =Colon:	
Gabriel Perigault	2,800
Hirzel, Feltman & Co.	2,300
A. N. Rotholz	300 5,400
Nov. 30.—By the <i>Siberia</i> =Colombia:	
Isaac Kuble & Co.	3,600
A. Lindo & Co.	2,000
Andreas & Co.	1,500
Lawrence Johnson & Co.	1,500
American Trading Co.	1,200
G. Amsinck & Co.	1,100 10,300
DEC. 1.—By the <i>Flandria</i> =Santha Martha:	
A. Held	8,500
G. Amsinck & Co.	1,500 10,000
DEC. 5.—By the <i>Monterey</i> =Mexico:	
Harburger & Stack	800
E. N. Tibbals & Co.	500
E. Steiger & Co.	500
L. N. Chemedlin & Co.	500 2,300
DEC. 6.—By the <i>Minnehaha</i> =London:	
George A. Alden & Co.	15,000
DEC. 6.—By the <i>Altai</i> =Colombia, etc.:	
A. Held	3,600
Isaac Brandon & Bros.	1,000
Isaac Kuble & Co.	800
Cadenas & Co.	700 5,500
DEC. 7.—By the <i>Advance</i> =Colon:	
G. Amsinck & Co.	19,200
Hirzel, Feltman & Co.	8,500
J. A. Medina & Co.	7,200

## CENTRALS.—Continued.

Lawrence Johnson & Co.	4,700
E. B. Strout	3,700
A. Santos & Co.	3,300
Piza Nephews & Co.	3,000
Dumarest Bros. & Co.	2,500
A. Rosenthal's Sons	1,500
A. M. Capen's Sons	1,100
Isaac Brandon & Bros.	1,000
D. A. De Lima & Co.	1,000
Meyer & Hecht	900
R. G. Barthold	700
J. A. Pauli & Co.	600
Gabriel Perigault	600 59,500
DEC. 8.—By the <i>Tintoretto</i> =Bahia:	
J. H. Rossbach & Bros.	12,000
Hirsch & Kaiser	10,000 22,000
DEC. 9.—By the <i>El Valle</i> =New Orleans:	
A. T. Morse & Co.	7,000
Manhattan Rubber Mfg. Co.	1,500
G. Amsinck & Co.	1,500
Eggers & Heinlein	1,000 11,000
DEC. 12.—By the <i>Comus</i> =New Orleans:	
Eggers & Heinlein	2,500
Manhattan Rubber Mfg. Co.	1,800
A. N. Rotholz	1,500 5,800
DEC. 13.—By the <i>Valencia</i> =Savanilla:	
American Trading Co.	4,500
J. A. Pauli & Co.	2,600
A. D. Straus & Co.	700 7,200
DEC. 14.—By the <i>City of Washington</i> =Colon:	
Gabriel Perigault	3,500
Isaac Brandon & Bros.	2,100
G. Amsinck & Co.	2,300
Hirzel, Feltman & Co.	1,000
Eggers & Heinlein	1,300
A. Rosenthal's Sons	1,200 11,400
DEC. 14.—By the <i>Moltke</i> =Hamburg:	
A. T. Morse & Co.	4,500
DEC. 19.—By the <i>St. Paul</i> =London:	
Hirsch & Kaiser	13,500
DEC. 19.—By the <i>Proteus</i> =New Orleans:	
A. T. Morse & Co.	6,500
G. Amsinck & Co.	1,000
Manhattan Rubber Mfg. Co.	1,000 8,500
DEC. 19.—By the <i>Vigilancia</i> =Mexico:	
E. Steiger & Co.	1,100
H. Marquardt & Co.	1,200
Fred. Probst & Co.	700
Smithers, Nordenholt & Co.	1,000
Graham, Hinkley & Co.	800
For Hamburg, etc.	1,000 5,800
DEC. 21.—By the <i>Seguranca</i> =Colon:	
Hirzel, Feltman & Co.	15,500
G. Amsinck & Co.	12,100
E. B. Strout	7,400
J. A. Medina & Co.	6,300
Roldan & Van Sickle	6,000
Dumarest Bros. & Co.	4,700
A. Santos & Co.	3,600
Gabriel Perigault	3,700
George A. Alden & Co.	3,500
American Trading Co.	2,600
Meyer Hecht & Co.	1,800
Lawrence Johnson & Co.	1,800
Isaac Kuble & Co.	1,700
Wallace L. Gough	1,200
Samuel M. Edler	1,000
Silva, Bussenius & Co.	900
Isaac Brandon & Bros.	800
A. Rosenthal's Sons	500 75,100
DEC. 21.—By the <i>Sarnia</i> =Colombia, etc.:	
Pedro A. Lopez	2,500
A. Held	1,500
Samuels & Cummings	800
G. Amsinck & Co.	700
Kunhardt & Co.	2,500
A. D. Straus & Co.	500 8,500
DEC. 22.—By the <i>Byron</i> =Bahia:	
J. H. Rossbach & Bros.	24,000
A. D. Hatch & Co.	15,000
Hirsch & Kaiser	14,000 53,000
DEC. 23.—By the <i>Baltic</i> =Liverpool:	
Emile Boris	7,000

## AFRICANS.

Nov. 25.—By the <i>Graf Waldersee</i> =Hamburg:	
Poel & Arnold	50,000
A. T. Morse & Co.	32,000
George A. Alden & Co.	13,500
Rubber Trading Co.	12,000
Earle Brothers	4,500 113,000
Nov. 25.—By the <i>Baltic</i> =Liverpool:	
George A. Alden & Co.	48,000
Wallace L. Gough	22,000 70,000
Nov. 26.—By the <i>Campana</i> =Liverpool:	
General Rubber Co.	73,000
George A. Alden & Co.	30,000 103,000
Nov. 28.—By the <i>Amsteldijk</i> =Rotterdam:	
Joseph Cantor	8,000
Nov. 29.—By the <i>Armenian</i> =Liverpool:	
Poel & Arnold	75,000
George A. Alden & Co.	45,000
A. T. Morse & Co.	25,000
Rubber Trading Co.	4,000 149,500
Nov. 29.—By the <i>Blucher</i> =Hamburg:	
A. T. Morse & Co.	75,000
Poel & Arnold	7,000
Rubber Trading Co.	5,000 87,000
DEC. 2.—By the <i>Cedric</i> =Liverpool:	
George A. Alden & Co.	80,000
Poel & Arnold	5,000
Henry A. Gould Co.	4,000 89,000
DEC. 5.—By the <i>Eutrua</i> =Liverpool:	
General Rubber Co.	35,000
George A. Alden & Co.	11,500 46,500
DEC. 7.—By the <i>Georgic</i> =Liverpool:	
General Rubber Co.	11,000
DEC. 7.—By the <i>British Empire</i> =Antwerp:	
A. T. Morse & Co.	100,000
DEC. 7.—By the <i>Finland</i> =Antwerp:	
A. T. Morse & Co.	185,000
George A. Alden & Co.	73,000
Poel & Arnold	70,000
Joseph Cantor	17,000
Rubber Trading Co.	14,000 359,000
DEC. 8.—By the <i>Oceanic</i> =Liverpool:	
Poel & Arnold	30,000
A. T. Morse & Co.	15,000 45,000
DEC. 10.—By the <i>La Lorraine</i> =Havre:	
A. T. Morse & Co.	11,000
Poel & Arnold	5,000 16,000
DEC. 12.—By the <i>New York</i> =London:	
Robinson & Tallman	10,000
DEC. 12.—By the <i>Lucania</i> =Liverpool:	
General Rubber Co.	55,000
George A. Alden & Co.	22,000 77,000
DEC. 14.—By the <i>Zeeland</i> =Antwerp:	
A. T. Morse & Co.	11,000
Poel & Arnold	7,000 18,000
DEC. 14.—By the <i>Moltke</i> =Hamburg:	
A. T. Morse & Co.	80,000
Rubber Trading Co.	17,000
Joseph Cantor	10,000
George A. Alden & Co.	10,000
Poel & Arnold	4,000 121,000
DEC. 14.—By the <i>Rotterdam</i> =Rotterdam:	
Poel & Arnold	30,000
DEC. 16.—By the <i>Bovic</i> =Liverpool:	
General Rubber Co.	120,000
George A. Alden & Co.	35,000 155,000
DEC. 17.—By the <i>Mongolian</i> =Glasgow:	
George A. Alden & Co.	22,000
DEC. 16.—By the <i>Majestic</i> =Liverpool:	
Poel & Arnold	35,000
Wallace L. Gough	33,500
A. T. Morse & Co.	5,000 73,500



## AFRICANS.—Continued.

Dec. 21.—By the <i>Kronlund</i> =Antwerp.	
Rubber Trading Co.....	10,000
Dec. 22.—By the <i>Victorian</i> =Liverpool:	
George A. Alden & Co.....	30,000
A. T. Morse & Co.....	20,000 50,000
Dec. 23.—By the <i>Baltic</i> =Liverpool:	
General Rubber Co.....	80,000
Poel & Arnold.....	60,000
A. T. Morse & Co.....	45,000
Wallace L. Gough.....	22,000
Earle Brothers.....	3,600 210,500

## EAST INDIAN.

Nov. 25.—By the <i>Hudson</i> =Singapore:	
Robert Branss & Co.....	35,000
Poel & Arnold.....	35,000
George A. Alden & Co.....	22,000
Winter & Smillie.....	15,000
A. T. Morse & Co.....	11,000 118,000
Nov. 30.—By the <i>Epsom</i> =Singapore:	
Winter & Smillie.....	8,000
Poel & Arnold.....	15,000 23,000
Dec. 6.—By the <i>Munchaha</i> =London:	
Robinson & Tallman.....	15,000
George A. Alden & Co.....	3,000 18,000
Dec. 13.—By the <i>Sagami</i> =Singapore:	
Robert Branss & Co.....	30,000
George A. Alden & Co.....	15,000
Winter & Smillie.....	15,000 60,000
Dec. 19.—By the <i>St. Paul</i> =London:	
Poel & Arnold.....	30,000
Dec. 21.—By the <i>Menominee</i> =London:	
Poel & Arnold.....	35,000

## GUTTA-JELUTONG.

Nov. 25.—By the <i>Hudson</i> =Singapore:	
George A. Alden & Co.....	115,000
Robert Branss & Co.....	60,000
Poel & Arnold.....	260,000
Hagemeyer & Bruhn.....	45,000 480,000

## GUTTA-JELUTONG—Continued.

Nov. 30.—By the <i>Epsom</i> =Singapore:	
Winter & Smillie.....	60,000
Poel & Arnold.....	30,000
Heabler & Co.....	45,000 135,000
Dec. 13.—By the <i>Sagami</i> =Singapore:	
Robert Branss & Co.....	150,000
George A. Alden & Co.....	55,000
Winter & Smillie.....	40,000 245,000
Dec. 21.—By the <i>Hindustan</i> =Singapore:	
George A. Alden & Co.....	300,000
Robinson & Tallman.....	95,000
J. H. Recknagel & Son.....	55,000 450,000

## GUTTA-PERCHA AND BALATA.

Nov. 25.—By the <i>Hudson</i> =Singapore:	
Heabler & Co.....	45,000
W. L. Wadleigh.....	5,000 50,000
Nov. 25.—By the <i>Graf Waldersee</i> =Hamburg:	
To Order.....	7,000
Nov. 29.—By the <i>Mesaba</i> =London:	
A. W. Brunn.....	9,000
Dec. 17.—By the <i>Manitton</i> =London:	
A. W. Brunn.....	4,000
Dec. 21.—By the <i>Hindustan</i> =Singapore:	
Heabler & Co.....	55,000
BALATA.	
Nov. 28.—By the <i>Banes</i> =Ciudad Bolivar:	
Frame & Co.....	1,500
Hamburg, etc.....	70,000 71,500
Dec. 5.—By the <i>Fon'abelle</i> =Surinam:	
Charles P. Shillstone.....	3,500
G. Amslück & Co.....	1,000 4,500
Dec. 8.—By the <i>Maraval</i> =Trinidad:	
Frame & Co.....	3,000
Dec. 23.—By the <i>Grenada</i> =Trinidad:	
Frame & Co.....	4,000

## CUSTOM HOUSE STATISTICS.

## PORT OF NEW YORK—NOVEMBER.

Imports:	POUNDS.	VALUE.
India-rubber.....	5,251,931	\$3,954,343
Gutta-percha.....	28,472	13,650
Gutta-jelutong (Pontianak) ..	1,700,454	53,874
Total.....	6,980,857	\$4,021,873
Exports:		
India-rubber.....	41,421	\$31,889
Reclaimed rubber.....	313,700	36,426
Rubber Scrap Imported.....	188,773	\$42,474

## BOSTON ARRIVALS.

Imports:	POUNDS.
Nov. 1.—By the <i>Canadian</i> =Liverpool:	
Poel & Arnold—African.....	4,528
Nov. 2.—By the <i>Columbian</i> =London:	
George A. Alden & Co.—East Indian.....	8,388
Nov. 5.—By the <i>Georgian</i> =Antwerp:	
Winter & Smillie—African.....	6,767
Nov. 14.—By the <i>Cymric</i> =Liverpool:	
Poel & Arnold—African.....	2,309
Nov. 15.—By the <i>Devonian</i> =Liverpool:	
George A. Alden & Co.—Caucho.....	15,931
Nov. 23.—By the <i>Sagamore</i> =Liverpool:	
George A. Alden & Co.—African.....	954
Nov. 24.—By the <i>Sagamore</i> =Liverpool:	
George A. Alden & Co.—Central.....	137,500
George A. Alden & Co.—African.....	2,587 140,087
Nov. 26.—By the <i>Philadelphia</i> =London:	
George A. Alden & Co.—African.....	55,800
George A. Alden & Co.—East Indian.....	14,071 69,871
Nov. 28.—By the <i>Ivernia</i> =Liverpool:	
George A. Alden & Co.—Central.....	22,776
Nov. 30.—By the <i>Bohemian</i> =Liverpool:	
George A. Alden & Co.—African.....	45,549
Total.....	317,160
[Value, \$13,039.]	

## OFFICIAL STATISTICS OF CRUDE INDIA-RUBBER (POUNDS)

## UNITED STATES.

MONTHS.	IMPORTS.	EXPORTS.	NET IMPORTS.
October, 1904.....	5,397,981	298,262	5,099,719
January-September.....	44,553,345	2,586,325	41,967,020
Ten months, 1904.....	49,951,326	2,884,587	47,066,739
Ten months, 1903.....	46,495,455	2,958,223	43,537,232
Ten months, 1902.....	41,290,317	2,816,659	38,473,658

## GERMANY.

MONTHS.	IMPORTS.	EXPORTS.	NET IMPORTS.
October, 1904.....	3,079,780	484,880	2,594,900
January-September.....	26,602,840	7,302,900	19,299,940
Ten months, 1904.....	29,682,620	7,787,780	21,894,840
Ten months, 1903.....	28,516,400	9,751,500	18,764,900
Ten months, 1902.....	27,540,020	11,475,640	16,065,280

## FRANCE.\*

MONTHS.	IMPORTS.	EXPORTS.	NET IMPORTS.
October, 1904.....	1,315,820	728,860	586,960
January-September.....	15,903,360	8,638,740	7,264,620
Ten months, 1904.....	17,219,180	9,397,600	7,851,580
Ten months, 1903.....	13,195,820	7,610,040	5,576,780
Ten months, 1902.....	13,277,000	8,326,340	4,950,660

## BELGIUM †

MONTHS.	IMPORTS.	EXPORTS.	NET IMPORTS.
August, 1904.....	828,916	1,359,507	[‡530,591]
January-July.....	10,870,468	8,368,448	2,502,020
Eight months, 1904.....	11,699,384	9,727,955	1,971,429
Eight months, 1903.....	10,470,295	8,131,959	2,335,336
Eight months, 1902.....	10,150,575	7,182,980	2,967,595

## GREAT BRITAIN.

MONTHS.	IMPORTS.	EXPORTS.	NET IMPORTS.
October, 1904.....	3,844,400	2,670,752	1,173,648
January-September.....	41,722,016	24,239,158	17,482,858
Ten months, 1904.....	45,566,416	26,909,910	18,656,506
Ten months, 1903.....	44,926,000	32,337,424	12,588,576
Ten months, 1902.....	38,779,776	26,006,336	12,683,440

## ITALY.

MONTHS.	IMPORTS.	EXPORTS.	NET IMPORTS.
October, 1904.....	141,680	25,740	115,940
January-September.....	1,128,160	77,440	1,050,720
Ten months, 1904.....	1,269,840	103,180	1,166,660
Ten months, 1903.....	1,286,120	126,720	1,159,400
Ten months, 1902.....	1,162,700	107,360	1,055,340

## AUSTRIA-HUNGARY.

MONTHS.	IMPORTS.	EXPORTS.	NET IMPORTS.
October, 1904.....	201,960	2,640	199,320
January-September.....	2,095,940	16,280	2,079,660
Ten months, 1904.....	2,297,900	18,920	2,278,980
Ten months, 1903.....	2,400,420	22,660	2,377,760
Ten months, 1902.....	2,179,320	12,320	2,167,000

NOTE.—German statistics include Gutta-percha, Balata, old rubber, and substitutes. French, Austrian, and Italian figures include Gutta-percha. The exports from the United States embrace the supplies for Canadian consumption.

\* General Commerce.

† Special Commerce.

‡ Net Exports.

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ROBERT B. BAIRD, VICE PRESIDENT

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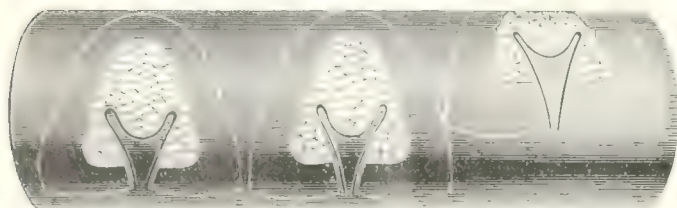
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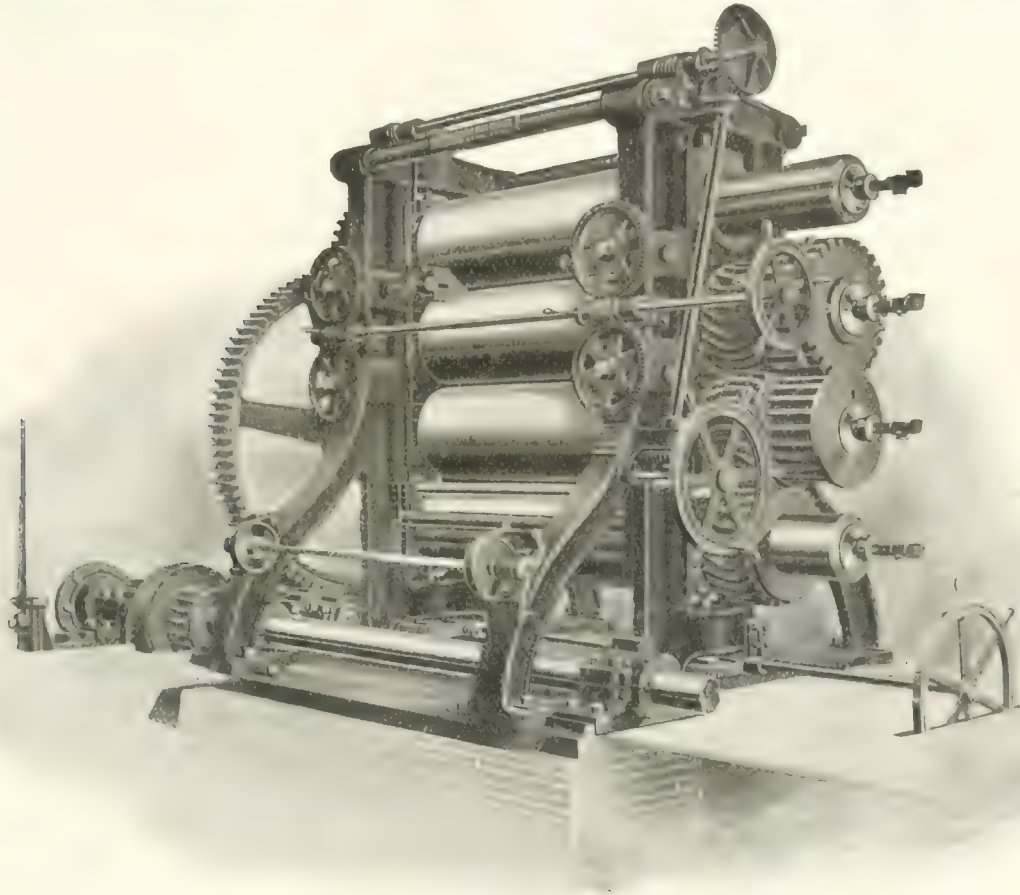
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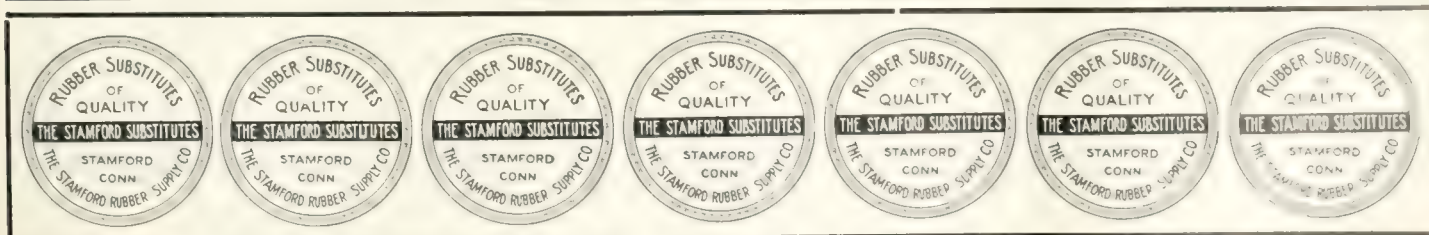
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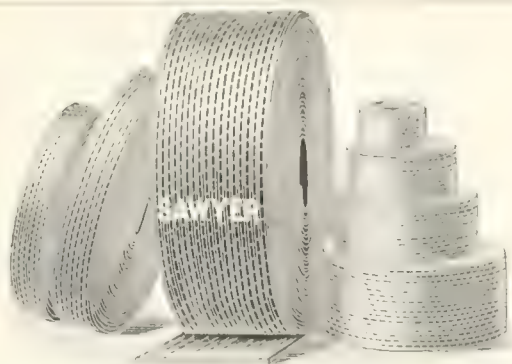
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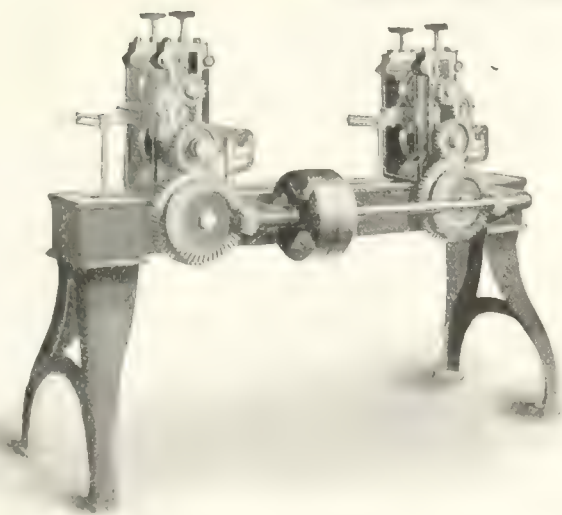
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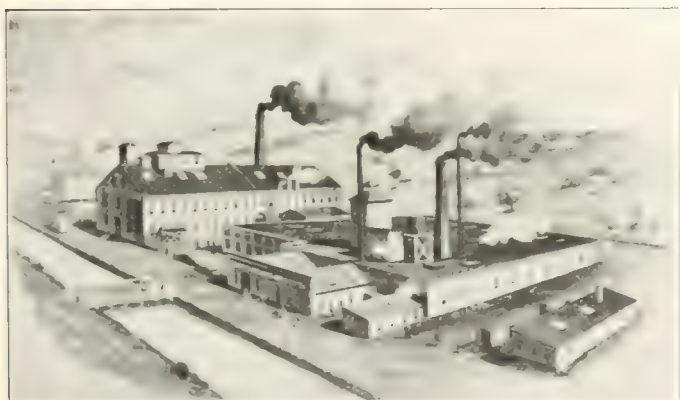
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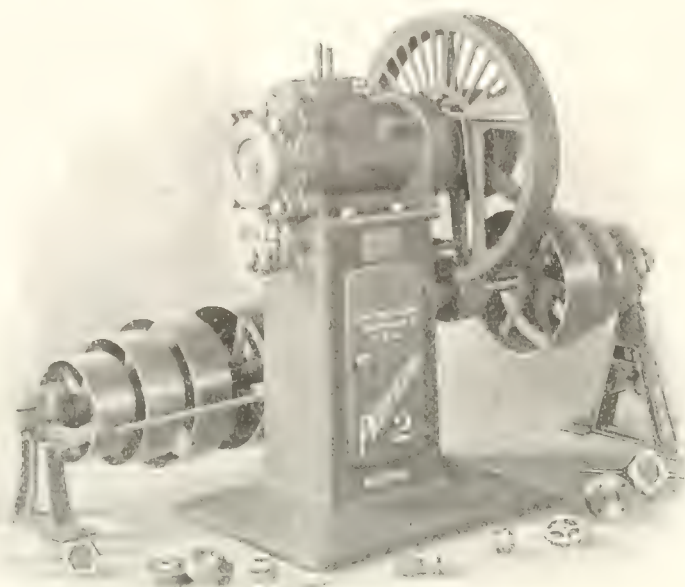
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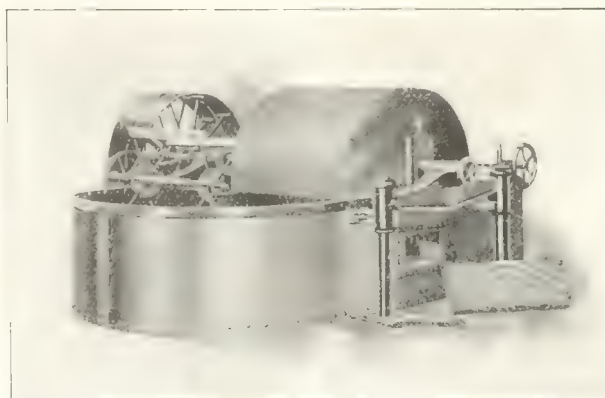
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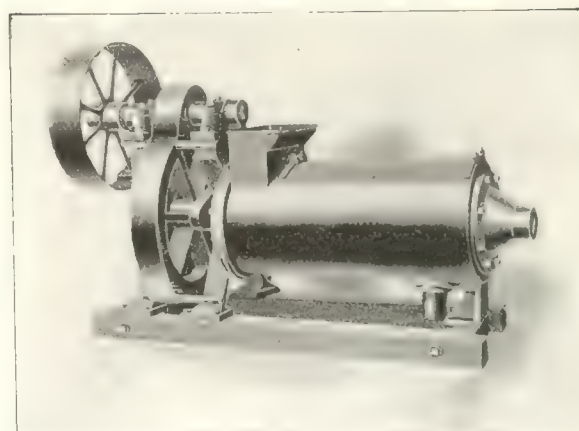
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*Removes all Sand, Bark and Dirt. Try it for Centrals, Africans and Coarse Para. Rubber Planters; this will clean your Scrap Rubber.*

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Write us

# Crude Rubber and Compounding Ingredients.

A TEXT BOOK OF RUBBER MANUFACTURE.

By HENRY C. PEARSON,

Editor of *The India Rubber World*.

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[WITH ILLUSTRATIONS AND TABLES.]

- I.—Grades of Crude Rubber; Physical Characteristics.
- II.—Some Little Known Rubbers or Pseudo Gums.
- III.—Primary Processes—Washing, Mixing, and Calendering.
- IV.—Vulcanizing Ingredients and Processes.
- V.—Ingredients used in Dry Mixing in Rubber Compounds.
- VI.—Substitutes for India-rubber and Gutta-percha.
- VII.—Resins, Balsams, and Waxes used in Compounding.
- VIII.—Coloring Matters.
- IX.—Acids, Alkalies, and Their Derivatives.
- X.—Vegetable, Mineral, and Animal Oils.
- XI.—Solvents used in India-rubber Proofing and Cementing and in Commercial Cements.
- XII.—Miscellaneous Processes and Compounds, including Waterproofing Compounds.
- XIII.—Physical Tests and Methods of Analysis of Crude Rubber and Vulcanized Rubber.
- XIV.—Gutta-percha.

[A CATALOGUE CONTAINING THE COVERINGS OF THIS BOOK TO THE VOLUME WILL BE SENT FREE ON APPLICATION.]

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PAYING SIX PER CENT. INTEREST  
ON INSTALLMENT AND CASH SHARES

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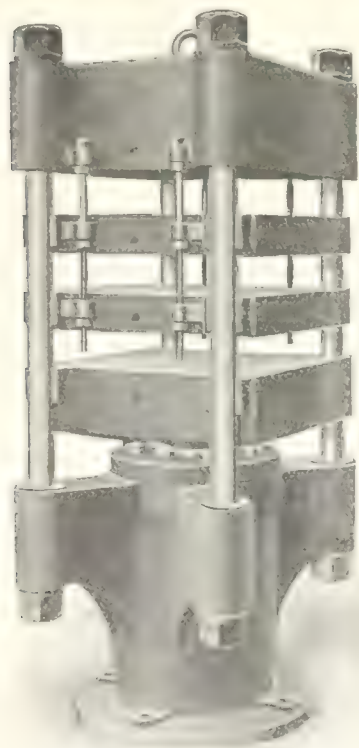
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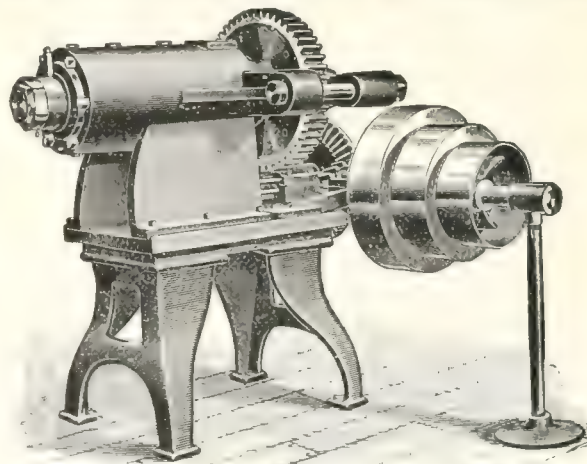
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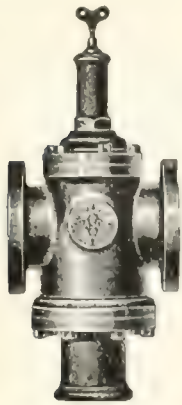
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The Passburg (Patent) "VACUUM DRYING  
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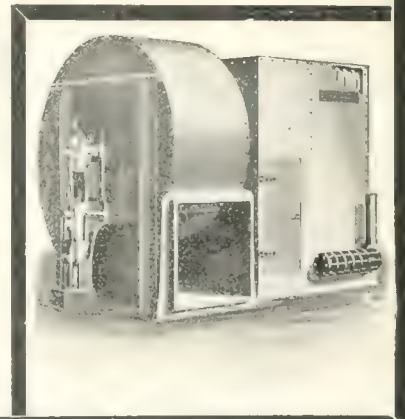
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MANUFACTURERS OF ALL KINDS OF

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## Publishers' Page



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*Changes of Address.*

SUBSCRIBERS desiring to have a change of address made on our mailing list will confer a favor by stating the former address as well as the new. Names on our mailing list are arranged by states and postoffices, and not alphabetically as names, and a search for a name without the help of the address last in use may consume considerable time.

*"Could Not Do Business Without It."*

TO THE INDIA RUBBER WORLD—*Gentlemen*: — — — We take great interest in your publication, and assure you that we could not do business without it. — — — Yours truly,

THE CANADIAN RUBBER COMPANY.

Per L. L. Lundy, Local Manager

Halifax, Nova Scotia, December 19, 1904.

*From a Rubber Planter in Hawaii.*

TO THE INDIA RUBBER WORLD—*Gentlemen*: I wish to subscribe to your publication. If you will send me papers beginning with May 1, 1904, and the subsequent numbers, and a bill for one year, I will remit. I want all the articles written by Mr. Pearson on the subject of rubber on his recent trip to India. We are starting a rubber plantation here, of which I am president, and of course we are anxious to get all the information we can. Yours sincerely,

WILLIAM W. HALL.

Honolulu, T. H., December 8, 1904.

*"The Best for Information on Rubber."*

TO THE INDIA RUBBER WORLD—*Gentlemen*: Will you kindly forward to Mr. — — — a copy of your publication? We have this day written Mr. — — — and advised him that your paper was the best for information on rubber, and have also suggested that it would be well for him to subscribe to the same.

Thanking you in advance for your kind attention, we beg to remain,  
Yours very truly,

MUTUAL RUBBER PRODUCTION CO., NO. 1.

D. N. GRAVES, Secretary and General Manager.

Boston, Massachusetts, December 16, 1904.

*A Position Satisfactorily Filled.*

THE volume of correspondence passing through the offices of THE INDIA RUBBER WORLD in reference to our "Small Advertisement Department" would indicate that no other part of the paper is more closely read by the trade. We trust that very many of the "Wants" advertised there are realized; we certainly know that the number of responses to the advertisements reaches a large average. Several of those in our December 1 issue were answered by telegraph. Part of the correspondence relating to one "small ad." is as follows:

TO THE INDIA RUBBER WORLD, *Gentlemen*: I am in receipt of your telegram as follows:

J. H. H. — — —, Chicago, telegraphs can fill position perfectly.

Your want ad. December RUBBER WORLD; writing to-day.

I desire to state that the position as advertised for is satisfactorily filled. Thanking you for your interest in the matter, we remain, Yours very truly,

QUAKER CITY RUBBER COMPANY.

Philadelphia.

*A Banker on Advertising.*

At the last convention of the Pennsylvania Bankers' Association, Mr. William S. Powers, a Pittsburgh banker, delivered an address on the benefits of advertising that might well be considered by people in all other lines of business. There is room here for only one paragraph of Mr. Powers's address:

Above all, advertising to be effective must be persistent.

A common mistake is to look for results too soon. When a farmer plants his wheat in the fall he doesn't expect a harvest in a week or a month; when you give an order for a ten-story office building you don't go around to the site the following day and expect to find a completed building. The farmer knows he must wait until the seasons and the

chemicals of the earth work their changes. And you know that your building must proceed by gradual stages—brick upon brick, until finally finished. So it is with advertising. The first insertion does not influence the public mind, nor the last. But one added to the other, every one gathering strength from those that precede it, gradually influence the public mind and bring to your bank the business you desire.

*Thanks Due to a Friend.*

TO THE INDIA RUBBER WORLD—*Gentlemen*: Through the courtesy of a mutual friend—Mr. — — —, we believe—we have received several copies of your publication. We have become so much interested in this periodical that we are quite ready to have you enter our name on your subscription list, and hand you herewith our check for \$3 in payment of one year's subscription. Yours truly,

— — — CO.

Providence, R. I., December 13, 1904.

*"The Only Rubber Journal."*

A GERMAN rubber manufacturing firm desiring to subscribe for an American rubber journal, sent an inquiry to a friend, which resulted finally in the following information:

DEAR SIR: The only rubber journal we know of is THE INDIA

RUBBER WORLD, No. 150 Nassau street. We are,

Yours very truly, DAILY TRADE RECORD CO.

New York, December 16, 1904.

—in consequence of which the inquirer was able to place an order in due time.

*A Rubber Man's Library.*

THE record formed by the set of fifteen bound volumes comprising the issues of this Journal since 1889 is unquestionably the fullest and most complete history of the India-rubber and allied trades, not only within the period named, but in the past, since many articles have been published in relation to the beginnings of the rubber interest. This set of volumes, therefore, is essentially a rubber man's library of the highest value.

*A Book on Rubber Planting.*

A RECENT visitor to the offices of this journal, interested in rubber planting, was attracted by a set of bound volumes of THE INDIA RUBBER WORLD. On looking through some of them, and seeing the number of articles in relation to rubber culture, and noting their character, he at once purchased those for the past two years, as likely to be of great help to him. In answer to frequent inquiries for printed matter on rubber planting, we are obliged to say that we know of no other books containing so much information on the subject as these same bound volumes.

*Back Numbers Wanted.*

THE Publishers are desirous of obtaining a few copies in good condition of THE INDIA RUBBER WORLD for May and October 1903 and January 1904. Twenty-five cents per copy will be paid, either in cash or extending the account of subscribers.

## SPECIAL NOTICES.

SALESMAN.—Experienced Salesman wanted to work Greater New York trade, in Mechanical Rubber Goods. Address G. N. Y., care of THE INDIA RUBBER WORLD. [696]

## A TIRE OPPORTUNITY.

WE have room, power and steam, and would join party already established or desirous of starting, in making Automobile Tires and Mechanical Rubber Goods. Address NEW DEPARTURE, care of THE INDIA RUBBER WORLD.



## Small Advertisement Department.

### SITUATIONS OPEN.

**SALESMAN** wanted for a complete line of Mechanical Rubber Goods, and Cotton Fire Hose, in Western States. Must have established trade and first class references. State length of experience, kind of goods sold, and salary required. Address **MANUFACTURER**, care of **THE INDIA RUBBER WORLD**. [687]

**DRUGGISTS' SUNDRIES.**—A reliable established mill wants a man who thoroughly understands the making of all kinds of rubber Druggists' Sundries. Must have ability to organize and run a complete line. A good opportunity for an able man. Address **COMPLETE**, care of **THE INDIA RUBBER WORLD**. [688]

**FOREMAN.**—A first class foreman wanted for Rubber Department in an Insulated Wire Plant about to be started. Must have a knowledge of best machinery, and competent to arrange same to best advantage to get bottom costs. To a man who can fill the bill a good opportunity is offered. Address **X. Y. Z.**, care of **THE INDIA RUBBER WORLD**. [690]

**SALESMAN.**—Experienced Rubber Salesman wanted to cover Southern territory on Clothing and Sundries. Address **R.**, care of **THE INDIA RUBBER WORLD**. [691]

### POSITION WANTED.

**MANAGER OR SUPERINTENDENT.**—Position wanted as Manager or Superintendent of factory or department, by man of 33, with 12 years' experience, particularly on Molded Goods, Sundries, and Vehicle Tires. Thorough knowledge of compounding, cost of production, up-to date shop methods, etc. Can start Hard Rubber Department if desired; have best compounds in United States for latter line. Would go to Pacific Coast. Address **EXECUTIVE**, care of **THE INDIA RUBBER WORLD**. [690]

**AN American** with thorough practical experience in the various lines of Mechanical Rubber work, expert in re-modeling and designing of labor saving machinery and departments, familiar with piece work and cost of systems, desires to locate with an American company. Address **G. B.**, care of **THE INDIA RUBBER WORLD**. [691]

**SUPERINTENDENT** of experience in Mechanical Rubber Goods, in good connections, and who will be at liberty after January 1, is open to an engagement in a good factory; competent to build and equip a new factory or to remodel an old one. Feels qualified to make money for any Mechanical Rubber factory. Address **PRACTICAL**, care of **THE INDIA RUBBER WORLD**. [695]

### SITUATIONS OPEN IN EUROPE.

**A LARGE European Rubber Company** is open to engage the services of a Practical Superintendent for their Mechanical Department. Must have a thorough knowledge of the manufacture in all its branches of Belting, Hose, Sheet Rubber, Valves, and also have a knowledge of Machinery of every description. Liberal remuneration. Write with full particulars of previous experience, salary required, and all particulars to **C. V.**, care of **THE INDIA RUBBER WORLD**. All communications will be treated confidentially. [678]

**SHOES.**—A large European Rubber Company is open to engage the services of a Practical Superintendent for their Shoe Department. Must have a thorough knowledge of the manufacture in all its branches of Overshoes, Boots, and Canvas Shoes of every description. Liberal remuneration. Write with full particulars of previous experience, salary required, and all particulars to **FOOTWEAR**, care of **THE INDIA RUBBER WORLD**. All communications will be treated confidentially. [677]

### AGENT WANTED FOR AMERICA.

**A FRENCH manufacturer** of Substitutes desires a General Agent for America, who is thoroughly acquainted with the India Rubber Goods manufacturing trade. Address **Mme. F. LEFRANT & CIE.**, Ham, Somme, France. [692]

**HERBERT S. KIMBALL,**

**MILL ARCHITECT and ENGINEER,**  
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DESIGNING  
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SPECIALTY

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**ALL KINDS RUBBER WASTE.**—We sell at low price, pure unvulcanized Rubber Scrap from Cement Waste. Write for free sample. Best cash prices paid for rubber scrap and waste. Old Wringer Rolls bought and sold a specialty. **UNITED STATES WASTE RUBBER CO.**, No. 487 N. Warren avenue, Brockton, Mass. [680]

**FOR SALE.**—First-class Cement Churns or Mixers at half value. Address **JOSEPH WHITNEY**, 48 North Front St., Philadelphia, Pa. [680]

### FORMULAS FOR SALE.

**THE advertiser** has for sale strictly up-to-date recipes for all kinds of Rubber Goods, Mechanical, Hard and Soft Rubber Goods, Molded and Wrapped, Gaskets, Valves, Tubing, Hose, Packing, Auto, Carriage, and Bicycle Tires, Druggists' Sundries, Dipped Goods, Cements, Shoe and Rubber, Dental Rubbers. Also plans for up-to-date Dipping Plant and Vapor Cure. Recipes are practical and guaranteed cheapest and best known. In use by large manufacturers. All cures and information furnished. Above are invaluable to rubber workers. No reasonable offer refused for single recipes or those desired. Address in confidence, **B. R.**, care of **THE INDIA RUBBER WORLD**. [689]

### SECOND HAND MACHINERY.

**IF it's about second hand Rubber Machinery, write us; if about Scrap Iron, write our competitors, as we do not buy Machinery that is unfit for use. A point to those who want to bdy: "We handle all kinds" W. C. COLEMAN CO., Setauket (Long Island), New York.**

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**ONE** new Devulcanizer, never used, 5 ft. diameter, 30 ft. long, for devulcanizing Shoddy; one new Birmingham Spreader, size 50", brand new, never taken out of the case it was shipped in from the factory; one Centrifugal Machine, size about 50" diameter; one large Engine, cylinder 24" x 46", made by Wright, Newburg, in the best condition; both steam and hydraulic Pumps; seven hydraulic Presses, 30" x 30"; three hand Presses, used in making Heels; seven 12" x 36" Grinders; one 15" x 24" Cracker; one 10" x 20" Cracker; one 8" x 12" Washer; two 18" x 40" Calenders; one five roll 12" x 44" Calender; fifty Solid Tire Molds (Kelly style), with all sizes of cavities; Bicycle Tire Molds; Pneumatic Tire Molds, and a large lot of other Molds; about 30 tons of Shafting, Pulleys, Hangers; No. 2 Royle Tubing Machine; Boilers, Piping and other kinds of Rubber Mill Machinery; One large Cedar Tank, 33 ft. diameter, 33 ft. high, cedar 3" thick, 13 large iron bands; almost new, and in the best condition.

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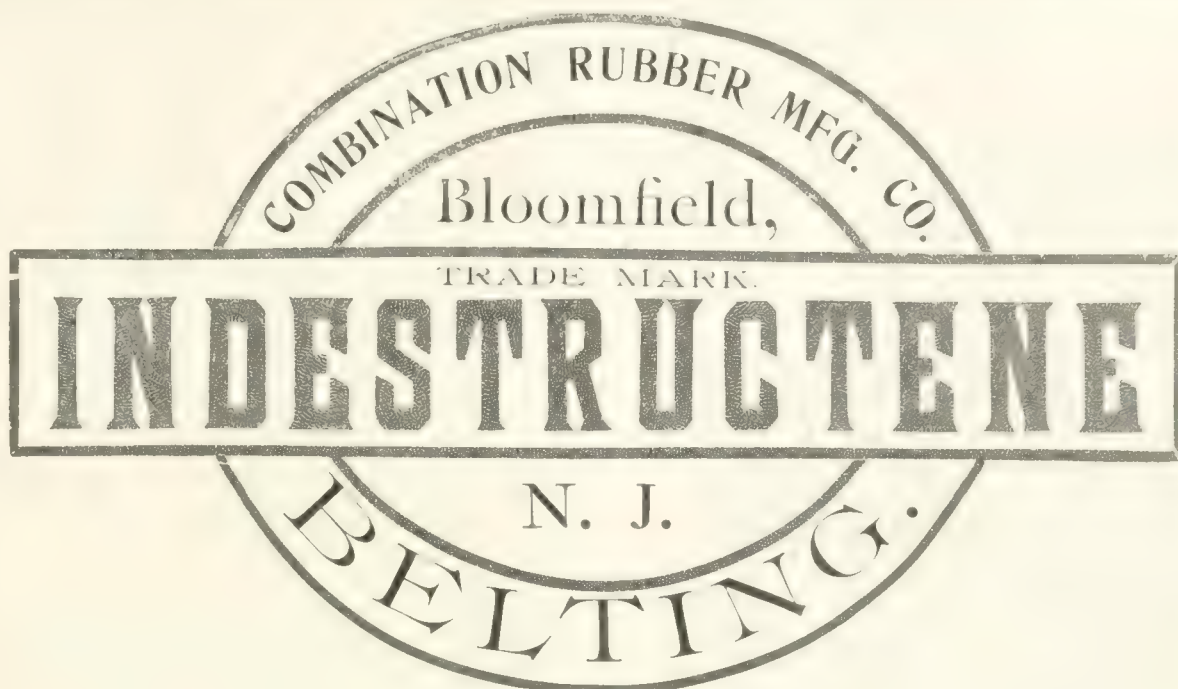
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Mechanical Rubber Goods.

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**Reclaimed and Devulcanized Rubber**

**FOR**

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### and other Tropical Seeds and Plants.

**Hevea Brasiliensis** (Pará rubber) seeds supplied from August to October every year; booking necessary before the end of July to avoid disappointments. Shipment of both seeds and plants at one year's notice.

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New England Butt Co.	XXXIX
New Jersey Car Spring & Rubber Co.	I
New Jersey Rubber Co.	XXXVI
New Jersey Zinc Co.	XXXVI
New York Belting & Packing Co.	XX
New York Rubber Co.	VIII
North British Rubber Co., Ltd.	XXXIX
Peerless Rubber Mfg. Co.	XXXVIII
Pequannoc Rubber Co.	XXXIII
Philadelphia Rubber Wks.	XXXVIII
Picher Lead Co.	XXI
Plymouth Rubber Co.	XXXIII
Pure Gum Specialty Co.	XIV
Republic Rubber Co.	VIII
Revere Rubber Co.	LI
Royle & Sons, John.	XXXII
Rubber Trading Co.	XXI

Salomon Bros. & Co.	XXX
Sawyer Belting Co.	XXXIX
Scheel, Wm. H.	XXXVI
Sharples, Stephen P.	XXXVI
Sheip Mfg. Co., Henry H.	XXXV
Speight, Geo. W.	I
Stamford Rubber Supply Co.	XXXVII
Stokes Rubber Co., Jos.	XV
Sturtevant Co., B. F.	XXXVI
Taintor Mfg. Co., H. F.	VII
Terry, H. L.	XL
Textile-Finishing Machinery Co.	XXXIV
Thropp, William B.	XXXIV
Trenton Rubber Mfg. Co.	IX
"Tropical Agriculturist"	XL
Turner, Vaughn & Taylor Co.	XXXII
Tyer Rubber Co.	LII
Type & King.	XXXVII
United States Rubber Co.	XXXVII
U. S. Rubber Reclaiming Wks.	XXXI
U. S. Waste Rubber Co.	XXXVIII
Voorhees Rubber Mfg. Co.	V
Wales Goodyear Shoe Co.	XXXVII
Wanted and For Sale.	XXXVIII
Weld Mfg. Co.	I
Wellman Sole Cutting Machine Co.	XXXIV
White, T. & S. C., Co.	XXXVI
Whitman & Barnes Mfg. Co.	VI
Williams & Bros., J. F.	XL
Wirt & Knox Mfg. Co.	XXXI
Wolpert, M. J.	XXXI
Woodman, Ph. D., Durand.	XXXVII
Yerdon, William.	X

## MECHANICAL RUBBER GOODS

Belting.
Diaphragms.
Gaskets.
Hose (Fire, Garden, Steam).
Mats and Matting.
Mould Work.
Packing.
Valves.
Washers.
Mechanical Rubber Goods—General.
Boston Belting Co., Boston-New York.
Boston Woven Hose & Rubber Co.
Bowers Rubber Co., San Francisco, Cal.
Canadian Rubber Co. of Montreal.
Chicago Rubber Wks., Chicago.
Cleveland Rubber Co., Cleveland, O.
Combination Rubber Mfg. Co., Bloomfield, N. J.
Continental Caoutchouc & Gutta-percha Co., Hanover, Germany.
Empire Rubber Mfg. Co., Trenton, N. J.
Eureka Fire Hose Co., New York.
Eureka Rubber Mfg. Co. of Trenton.
B. F. Goodrich Co., Akron, O.
Gutta Percha & Rubber Mfg. Co., N. Y.
Gutta Percha & Rubber Mfg. Co., Toronto.
Home Rubber Co., Trenton, N. J.
Lake Shore Rubber Co., Erie, Pa.
Liverpool Rubber Co., Liverpool, Eng.
Manhattan Rubber Mfg. Co., New York.
Mechanical Rubber Co., New York.
N. J. Car Spring & Rubber Co., Jersey City, N. J.
New York Belting & Packing Co., N. Y.
New York Rubber Co., New York.
North British Rubber Co., Ltd., Edinburgh.
Peerless Rubber Mfg. Co., New York.
Republic Rubber Co., Youngstown, Ohio.
Revere Rubber Co., Boston.
Jes. Stokes Rubber Co., Trenton, N. J.

## MECHANICAL GOODS.

Trenton Rubber Mfg. Co., Trenton, N. J.
Voorhees Rubber Mfg. Co., Jersey City.
Whitman & Barnes Mfg. Co., Akron, O.
Air Brake Hose.
Boston Belting Co., Boston-New York.
Boston Woven Hose & Rubber Co.
Canadian Rubber Co. of Montreal.
Combination Rubber Mfg. Co., Bloomfield, N. J.
Eureka Rubber Mfg. Co. of Trenton.
B. F. Goodrich Co., Akron, O.
Home Rubber Co., Trenton, N. J.
N. J. Car Spring & Rubber Co., Jersey City.
Peerless Rubber Mfg. Co., New York.
Republic Rubber Co., Youngstown, Ohio.
Revere Rubber Co., Boston-New York.
Voorhees Rubber Mfg. Co., Jersey City.
Whitman & Barnes Mfg. Co., Akron, O.
Belting (Canvas).
Boston Woven Hose & Rubber Co.
Canadian Rubber Co. of Montreal.
Eureka Fire Hose Co., New York.
Peerless Rubber Mfg. Co., New York.
Revere Rubber Co., Boston-New York.
Sawyer Belting Co., East Cambridge, Mass.
Billiard Cushions.
Boston Belting Co., Boston.
Canadian Rubber Co. of Montreal.
Combination Rubber Mfg. Co., Bloomfield, N. J.
B. F. Goodrich Co., Akron, O.
Manhattan Rubber Mfg. Co., New York.
New York Belting & Packing Co., Ltd.
New York Rubber Co., New York.
Revere Rubber Co., Boston-New York.
Whitman & Barnes Mfg. Co., Akron, O.
Blankets—Printers'.
Boston Belting Co., Boston.
Canadian Rubber Co. of Montreal.
Hodgman Rubber Co., New York.
Liverpool Rubber Co., Liverpool, Eng.
N. J. Car Spring & Rubber Co., Jersey City, N. J.
Revere Rubber Co., Boston-New York.
Voorhees Rubber Mfg. Co., Jersey City.

## MECHANICAL GOODS.

Brushes.
C. J. Bailey & Co., Boston.
Buffers.
Boston Belting Co., Boston-New York.
Canadian Rubber Co. of Montreal.
Liverpool Rubber Co., Ltd., Liverpool.
"Bull Dog" Packing.
Boston Woven Hose & Rubber Co.
Card Cloths.
Canadian Rubber Co. of Montreal.
Mechanical Fabric Co., Providence, R. I.
Carriage Mats.
Boston Belting Co., Boston-New York.
Boston Woven Hose & Rubber Co.
Canadian Rubber Co. of Montreal.
B. F. Goodrich Co., Akron, O.
Home Rubber Co., Trenton, N. J.
N. J. Car Spring & Rubber Co., Jersey City, N. J.
Peerless Rubber Mfg. Co., New York.
Voorhees Rubber Mfg. Co., Jersey City.
Coin Mats.
Canadian Rubber Co. of Montreal.
Faultless Rubber Co., Akron, Ohio.
B. F. Goodrich Co., Akron, O.
N. J. Car Spring & Rubber Co., Jersey City, N. J.
New York Belting & Packing Co., N. Y.
Cord (Pure Rubber).
Boston Belting Co., Boston-New York.
Boston Woven Hose & Rubber Co.
Cleveland Rubber Co., Cleveland, O.
Davol Rubber Co., Providence, R. I.
Empire Rubber Mfg. Co., Trenton, N. J.
Home Rubber Co., Trenton, N. J.
Manhattan Rubber Mfg. Co., New York.
N. J. Car Spring & Rubber Co., Jersey City, N. J.
New York Belting & Packing Co., N. Y.
Peerless Rubber Mfg. Co., New York.
Republic Rubber Co., Youngstown, Ohio.
Revere Rubber Co., Boston-New York.
Voorhees Rubber Mfg. Co., Jersey City.

## MECHANICAL GOODS.

Deckle Straps.
Boston Belting Co., Boston.
Deckle Straps—Continued.
Liverpool Rubber Co., Liverpool, Eng.
Mechanical Rubber Co., Chicago.
New York Belting & Packing Co., N. Y.
Republic Rubber Co., Youngstown, Ohio.
Revere Rubber Co., Boston-New York.
"Dods" Packing.
Bowers Rubber Co., San Francisco, Cal.
Door Springs.
Hodgman Rubber Co., New York.
Dredging Sleeves.
Boston Belting Co., Boston-New York.
Boston Woven Hose & Rubber Co.
B. F. Goodrich Co., Akron, O.
Home Rubber Co., Trenton, N. J.
N. J. Car Spring & Rubber Co., Jersey City.
Republic Rubber Co., Youngstown, Ohio.
Fleshing Bands.
Republic Rubber Co., Youngstown, Ohio.
Force Cups.
Hodgman Rubber Co., New York.
"Forsyth" Combination Packing.
Boston Belting Co., Boston-New York.
Fruit Jar Rings.
Boston Woven Hose & Rubber Co.
Canadian Rubber Co. of Montreal.
Cleveland Rubber Co., Cleveland, O.
B. F. Goodrich Co., Akron, O.
Empire Rubber Mfg. Co., Trenton, N. J.
Eureka Rubber Mfg. Co. of Trenton.
Manhattan Rubber Mfg. Co., New York.
Republic Rubber Co., Youngstown, Ohio.
New York Belting & Packing Co., N. Y.
Whitman & Barnes Mfg. Co., Akron, O.
Fuller Balls.
B. F. Goodrich Co., Akron, O.
N. J. Car Spring & Rubber Co., Jersey City.



## RUBBER BUYERS' DIRECTORY—CONTINUED.

## MECHANICAL GOODS.

## Fuller Balls—Continued.

Peerless Rubber Mfg. Co., New York.  
Republic Rubber Co., Youngstown, O.  
Whitman & Barnes Mfg. Co., Akron, O.

## Gage Glass Washers.

Boston Belting Co., Boston, Mass.  
Canadian Rubber Co. of Montreal.  
Cleveland Rubber Co., Cleveland, O.  
Empire Rubber Mfg. Co., Trenton, N. J.  
Home Rubber Co., Trenton, N. J.  
Liverpool Rubber Co., Liverpool, Eng.  
Mattson Rubber Mfg. Co., New York.  
Mechanical Rubber Co., Chicago, Ill.  
N. J. Car Spring & Rubber Co., Jersey City, N. J.  
New York Belting & Packing Co., N. Y.  
New York Rubber Co., New York.  
Revere Rubber Co., Boston, Mass.  
Jos. Stokes Rubber Co., Trenton, N. J.  
Voorhees Rubber Mfg. Co., Jersey City, N. J.

## Gas-Bags (Rubber).

Canadian Rubber Co. of Montreal.  
Cleveland Rubber Co., Cleveland, O.  
Davol Rubber Co., Providence, R. I.  
B. F. Goodrich Co., Akron, O.  
Liverpool Rubber Co., Liverpool, Eng.  
N. J. Car Spring & Rubber Co., Jersey City, N. J.  
Peerless Rubber Mfg. Co., New York.  
Tyer Rubber Co., Andover, Mass.  
Voorhees Rubber Mfg. Co., Jersey City.

## Gasket Tubing.

Canadian Rubber Co. of Montreal.  
Jenkins Bros., New York.

## Grain Drill Tubes.

Boston Belting Co., Boston-New York.  
Republic Rubber Co., Youngstown, O.  
Whitman & Barnes Mfg. Co., Akron, O.

## Hat Bags.

Boston Belting Co., Boston.  
Canadian Rubber Co. of Montreal.  
Home Rubber Co., Trenton, N. J.  
Manhattan Rubber Mfg. Co., New York.  
Mattson Rubber Co.  
Mechanical Rubber Co., Chicago.  
N. J. Car Spring & Rubber Co., Jersey City, N. J.  
New York Belting & Packing Co., N. Y.  
New York Rubber Co., New York.  
Peerless Rubber Mfg. Co., New York.  
Republic Rubber Co., Youngstown, O.  
Revere Rubber Co., Boston.

## Horse Shoe Pads.

Canadian Rubber Co. of Montreal.  
Home Rubber Co., Trenton, N. J.  
Peerless Rubber Mfg. Co., New York.  
Plymouth Rubber Co., Stoughton, Mass.  
Revere Rubber Co., Boston-New York.  
Voorhees Rubber Mfg. Co., Jersey City.  
Whitman & Barnes Mfg. Co., Akron, O.

## Hose—Armored.

Boston Belting Co., Boston-New York.  
Canadian Rubber Co. of Montreal.  
B. F. Goodrich Co., Akron, O.  
N. J. Car Spring & Rubber Co., Jersey City.  
Peerless Rubber Mfg. Co., New York.  
Republic Rubber Co., Youngstown, O.  
Revere Rubber Co., Boston-New York.  
Voorhees Rubber Mfg. Co., Jersey City.

## Hose Couplings.

Boston Woven Hose & Rubber Co.  
Canadian Rubber Co. of Montreal.

## Hose Fittings.

Boston Woven Hose & Rubber Co.

## Hose Linings.

Boston Belting Co., Boston-New York.  
Boston Woven Hose & Rubber Co.  
Empire Rubber Mfg. Co., Trenton, N. J.  
Eureka Rubber Mfg. Co., Trenton, N. J.  
N. J. Car Spring & Rubber Co., Jersey City, N. J.  
Peerless Rubber Mfg. Co., New York.

## Hose—Protected.

Boston Belting Co., Boston-New York.  
Revere Rubber Co., Boston-New York.  
Voorhees Rubber Mfg. Co., Jersey City.

## Hose Racks and Reels.

Whitman & Barnes Mfg. Co., Philadelphia.

## MECHANICAL GOODS.

## Hose Rubber Lined.

## COLLON AND LINES.

Boston Belting Co., Boston-New York.  
Boston Woven Hose & Rubber Co.  
Canadian Rubber Co. of Montreal.  
Cleveland Rubber Co., Cleveland, O.  
Empire Rubber Mfg. Co., Trenton, N. J.  
Eureka Fire Hose Co., New York.  
Eureka Rubber Mfg. Co. of Trenton.  
B. F. Goodrich Co., Akron, O.  
Gutta Percha & Rubber Mfg. Co., N. Y.  
Gutta Percha and Rubber Mfg. Co. of Toronto.  
Home Rubber Co., Trenton, N. J.  
Manhattan Rubber Mfg. Co., New York.  
N. J. Car Spring & Rubber Co., Jersey City, N. J.  
New York Belting & Packing Co., N. Y.  
Peerless Rubber Mfg. Co., New York.  
Republic Rubber Co., Youngstown, O.  
Revere Rubber Co., Boston.  
Jos. Stokes Rubber Co., Trenton, N. J.  
Voorhees Rubber Mfg. Co., Jersey City.  
Whitman & Barnes Mfg. Co., Akron, O.

## Hose—Submarine.

Boston Belting Co., Boston-New York.  
B. F. Goodrich Co., Akron, O.  
Republic Rubber Co., Youngstown, O.

## Hose—Wire Wound.

Boston Belting Co., Boston-New York.  
Boston Woven Hose & Rubber Co.  
Canadian Rubber Co. of Montreal.  
B. F. Goodrich Co., Akron, O.  
N. J. Car Spring & Rubber Co., Jersey City.  
Peerless Rubber Mfg. Co., New York.  
Republic Rubber Co., Youngstown, O.  
Revere Rubber Co., Boston.

## "Jenkins '96" Packing.

Jenkins Bros., New York.

## Lawn Sprinklers.

Boston Woven Hose & Rubber Co.  
Canadian Rubber Co. of Montreal.

## Mallets (Rubber).

Boston Belting Co., Boston-New York.  
B. F. Goodrich Co., Akron, O.  
Peerless Rubber Mfg. Co., New York.  
Revere Rubber Co., Boston-New York.

## Mould Work.

[See Mechanical Rubber Goods.]  
Davidson Rubber Co., Boston.  
Davol Rubber Co., Providence, R. I.  
Faultless Rubber Co., Akron, O.  
Hardman Rubber Co., Belleville, N. J.  
Hodgman Rubber Co., New York.  
La Crosse (Wis.) Rubber Mills Co.  
Mattson Rubber Co., New York.  
National India Rubber Co., Bristol, R. I.  
Plymouth Rubber Co., Stoughton, Mass.  
Tyer Rubber Co., Andover, Mass.

## "Nubian" Packing.

Voorhees Rubber Mfg. Co., Jersey City.

## Oil Well Supplies.

Boston Belting Co., Boston-New York.  
Boston Woven Hose & Rubber Co.  
B. F. Goodrich Co., Akron, O.  
Home Rubber Co., Trenton, N. J.  
Lake Shore Rubber Co., Erie, Pa.  
N. J. Car Spring & Rubber Co., Jersey City.  
Peerless Rubber Mfg. Co., New York.  
Republic Rubber Co., Youngstown, O.  
Revere Rubber Co., Boston-Pittsburgh.  
Voorhees Rubber Mfg. Co., Jersey City.  
Whitman & Barnes Mfg. Co., Akron, O.

## Paper Machine Rollers.

Boston Belting Co., Boston-New York.  
B. F. Goodrich Co., Akron, O.  
Republic Rubber Co., Youngstown, O.  
Revere Rubber Co., Boston-New York.  
Peerless Rubber Mfg. Co., New York.  
Voorhees Rubber Mfg. Co., Jersey City.

## "Perfection" Belting.

Boston Woven Hose & Rubber Co.

## Plumbers' Supplies.

Canadian Rubber Co. of Montreal.  
B. F. Goodrich Co., Akron, O.  
Republic Rubber Co., Youngstown, O.

## Pump Valves.

[See Mechanical Rubber Goods.]  
Jenkins Bros., New York.

## MECHANICAL GOODS.

## "Rainbow" Packing.

Peerless Rubber Mfg. Co., New York.

## Rings.

Boston Belting Co., Boston-New York.  
B. F. Goodrich Co., Akron, O.  
Peerless Rubber Mfg. Co., New York.  
Plymouth Rubber Co., Stoughton, Mass.  
Republic Rubber Co., Youngstown, O.

## Rollers—Rubber Covered.

Boston Belting Co., Boston.  
Canadian Rubber Co. of Montreal.  
Cleveland Rubber Co., Cleveland, O.  
Empire Rubber Mfg. Co., Trenton, N. J.  
Eureka Rubber Mfg. Co. of Trenton.  
B. F. Goodrich Co., Akron, O.  
Home Rubber Co., Trenton, N. J.  
Manhattan Rubber Mfg. Co., New York.  
Mechanical Rubber Co., Chicago.  
N. J. Car Spring & Rubber Co., Jersey City, N. J.  
New York Belting & Packing Co., N. Y.  
Peerless Rubber Mfg. Co., New York.  
Plymouth Rubber Co., Stoughton, Mass.  
Republic Rubber Co., Youngstown, O.  
Revere Rubber Co., Boston-New York.

## Sewing Machine Rubbers.

B. F. Goodrich Co., Akron, O.

## Springs—Rubber.

Boston Belting Co., Boston-New York.  
Canadian Rubber Co. of Montreal.  
B. F. Goodrich Co., Akron, O.  
Hardman Rubber Co., Belleville, N. J.  
Liverpool Rubber Co., Liverpool, Eng.  
N. J. Car Spring & Rubber Co., Jersey City.  
Peerless Rubber Mfg. Co., New York.  
Plymouth Rubber Co., Stoughton, Mass.  
Republic Rubber Co., Youngstown, Ohio.  
Revere Rubber Co., Boston-New York.  
Voorhees Rubber Mfg. Co., Jersey City.

## Stair Treads.

Boston Belting Co., Boston-New York.  
Boston Woven Hose & Rubber Co.  
Canadian Rubber Co. of Montreal.  
Cleveland Rubber Co., Cleveland, O.  
Empire Rubber Mfg. Co., Trenton, N. J.  
Home Rubber Co., Trenton, N. J.  
Liverpool Rubber Co., Liverpool, Eng.  
Manhattan Rubber Mfg. Co., New York.  
N. J. Car Spring & Rubber Co., Jersey City, N. J.  
New York Belting & Packing Co., N. Y.  
New York Rubber Co., New York.  
Peerless Rubber Mfg. Co., New York.  
Republic Rubber Co., Youngstown, O.  
Revere Rubber Co., Boston-New York.  
Voorhees Rubber Mfg. Co., Jersey City.

## Thread.

Mechanical Fabric Co., Providence, R. I.  
Revere Rubber Co., Boston.

## Tiling.

Canadian Rubber Co. of Montreal.  
B. F. Goodrich Co., Akron, O.  
Gutta Percha & Rubber Mfg. Co., N. Y.  
N. J. Car Spring & Rubber Co., Jersey City.  
New York Belting & Packing Co., N. Y.  
Peerless Rubber Mfg. Co., New York.  
Republic Rubber Co., Youngstown, Ohio.  
Voorhees Rubber Mfg. Co., Jersey City.

## Tires.

AUTOMOBILE, BICYCLE, AND CARRIAGE.  
Canadian Rubber Co. of Montreal.  
Continental Caoutchouc & Gutta-percha Co., Hanover.  
Empire Rubber Mfg. Co., Trenton, N. J.  
B. F. Goodrich Co., Akron, O.  
Gutta Percha & Rubber Mfg. Co., Toronto.  
Kokomo Rubber Co., Kokomo, Ind.  
Lake Shore Rubber Co., Erie, Pa.  
Liverpool Rubber Co., Liverpool, Eng.  
North British Rubber Co., Ltd., Edinburgh.  
Plymouth Rubber Co., Stoughton, Mass.  
Republic Rubber Co., Youngstown, O.

## AUTOMOBILE, BICYCLE, AND CARRIAGE.

Boston Belting Co., Boston-New York.  
Revere Rubber Co., Boston-New York.  
Eureka Rubber Mfg. Co., Trenton, N. J.

## MECHANICAL GOODS.

## Truck Bands.

Boston Belting Co., Boston.  
Cleveland Rubber Co., Cleveland, O.  
Empire Rubber Mfg. Co., Trenton, N. J.  
B. F. Goodrich Co., Akron, O.  
Home Rubber Co., Trenton, N. J.  
Manhattan Rubber Mfg. Co., New York.  
Mechanical Rubber Co., Chicago.  
N. J. Car Spring & Rubber Co., Jersey City, N. J.  
New York Belting & Packing Co., N. Y.  
Peerless Rubber Mfg. Co., New York.  
Republic Rubber Co., Youngstown, O.  
Voorhees Rubber Mfg. Co., Jersey City.  
Whitman & Barnes Mfg. Co., Akron, O.

## Tubing.

[See Mechanical Rubber Goods.]

American Hard Rubber Co., New York.  
Davidson Rubber Co., Boston.  
Davol Rubber Co., Providence, R. I.  
Hardman Rubber Co., Belleville, N. J.  
Plymouth Rubber Co., Stoughton, Mass.  
Tyer Rubber Co., Andover, Mass.

## Tubing (Beer).

Boston Belting Co., Boston-New York.  
Boston Woven Hose & Rubber Co.  
Canadian Rubber Co. of Montreal.  
Faultless Rubber Co., Akron, Ohio.  
B. F. Goodrich Co., Akron, O.  
Peerless Rubber Mfg. Co., New York.  
Plymouth Rubber Co., Stoughton, Mass.  
Republic Rubber Co., Youngstown, O.  
Voorhees Rubber Mfg. Co., Jersey City.

## "Usudurian" Packing.

Revere Rubber Co., Boston-New York.

## Valve Balls.

Boston Belting Co., Boston.  
Cleveland Rubber Co., Cleveland, O.  
Manhattan Rubber Mfg. Co., New York.  
Mechanical Rubber Co., Chicago.  
New York Belting & Packing Co., N. Y.  
New York Rubber Co., New York.  
Peerless Rubber Mfg. Co., New York.  
Republic Rubber Co., Youngstown, O.  
Whitman & Barnes Mfg. Co., Akron, O.

## Valve Discs.

American Hard Rubber Co., New York.  
Boston Belting Co., Boston-New York.  
B. F. Goodrich Co., Akron, O.  
Peerless Rubber Mfg. Co., New York.  
Republic Rubber Co., Youngstown, O.  
Revere Rubber Co., Boston-New York.

## Valves.

[See Mechanical Rubber Goods.]  
Jenkins Bros., New York-Chicago.  
Plymouth Rubber Co., Stoughton, Mass.

## Wringer Rolls.

Canadian Rubber Co. of Montreal.  
Cleveland Rubber Co., Cleveland, O.  
B. F. Goodrich Co., Akron, O.  
Home Rubber Co., Trenton, N. J.  
Republic Rubber Co., Youngstown, O.

## DRUGGISTS' AND STATIONERS' SUNDRIES

## Atomizers.

## Bandages.

## Bulbs.

## Syringes.

## Water Bottles.

## Druggists' Sundries—General.

American Hard Rubber Co., New York.  
C. J. Bailey & Co., Boston.  
Geo. Borgfeldt & Co., New York.  
Canadian Rubber Co. of Montreal.  
Cleveland Rubber Co., Cleveland, O.  
Davidson Rubber Co., Boston.  
Davol Rubber Co., Providence, R. I.  
Faultless Rubber Co., Akron, O.  
B. F. Goodrich Co., Akron, O.  
Hanover Rubber Co., Hanover, Germany.  
Hardman Rubber Co., Belleville, N. J.  
Hodgman Rubber Co., New York.  
North British Rubber Co., Ltd., Edinburgh.  
Tyer Rubber Co., Andover, Mass.

## Balls, Dolls and Toys.

Canadian Rubber Co. of Montreal.  
Continental Caoutchouc & Gutta-percha Co.  
New York Rubber Co., New York.  
Whitman & Barnes Mfg. Co., Akron, O.



## RUBBER BUYERS' DIRECTORY—CONTINUED.

## DRUGGISTS' SUNDRIES

## Combs.

American Hard Rubber Co., New York  
Geo. Borgfeldt & Co., New York.  
Hanover Rubber Co., Hanover, Ger-  
many.

## Elastic Bands.

Canadian Rubber Co. of Montreal.  
Davidson Rubber Co., Boston.  
Davol Rubber Co., Providence, R. I.  
B. F. Goodrich Co., Akron, O.  
Hodgman Rubber Co., New York-Boston.  
Tyer Rubber Co., Andover, Mass.  
Whitman & Barnes Mfg. Co., Akron, O.

## Erasive Rubbers.

Davidson Rubber Co., Boston.  
B. F. Goodrich Co., Akron, O.  
Hardman Rubber Co., Belleville, N. J.  
Mattson Rubber Co., New York.

## Finger Cots.

Faultless Rubber Mfg. Co., Akron, O.  
B. F. Goodrich Co., Akron, O.  
Pure Gum Specialty Co., Barberton, O.

## Gloves.

Canadian Rubber Co. of Montreal.  
Davol Rubber Co., Providence, R. I.  
Faultless Rubber Co., Akron, O.  
B. F. Goodrich Co., Akron, O.  
Pure Gum Specialty Co., Barberton, O.

## Hard Rubber Goods.

American Hard Rubber Co., New York.  
Geo. Borgfeldt & Co., New York.  
Canadian Rubber Co. of Montreal.  
Davol Rubber Co., Providence, R. I.  
Hanover Rubber Co., Hanover, Ger-  
many.  
Hardman Rubber Co., Belleville, N. J.  
Stokes Rubber Co., Joseph, Trenton, N. J.  
Tyer Rubber Co., Andover, Mass.

## Hospital Sheetings.

Cleveland Rubber Co., Cleveland, O.  
Davidson Rubber Co., Boston.  
Davol Rubber Co., Providence, R. I.  
Hodgman Rubber Co., New York.  
Plymouth Rubber Co., Stoughton, Mass.  
Tyer Rubber Co., Andover, Mass.

## Hot Water Bottles.

[See Water Bottles.]

## Ice Bags.

Faultless Rubber Co., Akron, Ohio.  
B. F. Goodrich Co., Akron, O.  
Hodgman Rubber Co., New York.  
Pure Gum Specialty Co., Barberton, O.

## Ice Caps.

Faultless Rubber Co., Akron, Ohio.  
B. F. Goodrich Co., Akron, O.  
Hardman Rubber Co., Belleville, N. J.  
Pure Gum Specialty Co., Barberton, O.  
Tyer Rubber Co., Andover, Mass.

## Life Preservers.

Hodgman Rubber Co., New York.

## Nipples.

Canadian Rubber Co. of Montreal.  
Cleveland Rubber Co., Cleveland, O.  
Davidson Rubber Co., Boston.  
Davol Rubber Co., Providence, R. I.  
Faultless Rubber Co., Akron, O.  
B. F. Goodrich Co., Akron, O.  
Pure Gum Specialty Co., Barberton, O.  
Tyer Rubber Co., Andover, Mass.

## Sponges (Rubber).

Faultless Rubber Co., Ashland, Ohio.  
B. F. Goodrich Co., Akron, O.

## Stationers' Sundries.

American Hard Rubber Co., New York.  
Geo. Borgfeldt & Co., New York.  
Canadian Rubber Co. of Montreal.  
Cleveland Rubber Co., Cleveland, O.  
Davidson Rubber Co., Boston.  
Davol Rubber Co., Providence, R. I.  
B. F. Goodrich Co., Akron, O.  
Hanover Rubber Co., Hanover, Ger-  
many.  
Hardman Rubber Co., Belleville, N. J.  
Hodgman Rubber Co., New York-Boston.  
Tyer Rubber Co., Andover, Mass.

## Stopples (Rubber).

Cleveland Rubber Co., Cleveland, O.  
Davol Rubber Co., Providence, R. I.

## DRUGGISTS' SUNDRIES.

## Stopples (Rubber)—Continued.

Hodgman Rubber Co., New York.  
Manhattan Rubber Mfg. Co., New York.  
New York Belting & Packing Co., N. Y.  
Tyer Rubber Co., Andover, Mass.  
Whitman & Barnes Mfg. Co., Akron, O.

## Throat Bags.

Cleveland Rubber Co., Cleveland, O.  
Davol Rubber Co., Providence, R. I.  
B. F. Goodrich Co., Akron, O.  
Tyer Rubber Co., Andover, Mass.

## Tobacco Pouches.

Canadian Rubber Co. of Montreal.  
Faultless Rubber Co., Akron, Ohio.  
B. F. Goodrich Co., Akron, O.  
Pure Gum Specialty Co., Barberton, O.  
Tyer Rubber Co., Andover, Mass.

## Toys.

Geo. Borgfeldt & Co., New York.  
B. F. Goodrich Co., Akron, O.  
Hanover Rubber Co., Hanover, Ger-  
many.

MACKINTOSHED  
AND SURFACE  
GOODS

## Air Goods (Rubber).

Canadian Rubber Co. of Montreal.  
Cleveland Rubber Co., Cleveland, O.  
Davol Rubber Co., Providence, R. I.  
B. F. Goodrich Co., Akron, O.  
Hodgman Rubber Co., New York.  
New York Rubber Co., New York.  
National India Rubber Co., Providence.  
Tyer Rubber Co., Andover, Mass.

## Air Mattresses.

Canadian Rubber Co. of Montreal.  
Mechanical Fabric Co., Providence, R. I.

## Barbers' Bibs.

Davol Rubber Co., Providence, R. I.  
Tyer Rubber Co., Andover, Mass.

## Bathing Caps.

Davol Rubber Co., Providence, R. I.  
B. F. Goodrich Co., Akron, O.

## Bellows Cloths.

Boston Rubber Co., Boston.  
Cleveland Rubber Co., Cleveland, O.  
Hodgman Rubber Co., New York.  
La Crosse (Wis.) Rubber Mills Co.

## Calendering.

La Crosse (Wis.) Rubber Mills Co.  
Milford Rubber Co., Boston.  
Plymouth Rubber Co., Stoughton, Mass.

## Carriage Ducks and Drills.

Cleveland Rubber Co., Cleveland, O.  
Empire Rubber Mfg. Co., Trenton, N. J.  
Kureka Rubber Mfg. Co. of Trenton.  
Gutta Percha & Rubber Mfg. Co., To-  
ronto.

## Clothing.

Apsley Rubber Co., Hudson, Mass.  
Canadian Rubber Co. of Montreal.  
Cleveland Rubber Co., Cleveland, O.  
Granby Rubber Co., Granby, Quebec.  
Gutta Percha & Rubber Mfg. Co. of To-  
ronto.  
Hodgman Rubber Co., New York.  
La Crosse (Wis.) Rubber Mills Co.  
North British Rubber Co., Ltd., Edin-  
burgh.

## Cravenette.

Cravenette Co., Ltd.

## Diving Dresses.

Hodgman Rubber Co., New York.

## Dress Shields.

Hodgman Rubber Co., New York.  
Mattson Rubber Co., New York.

## Horse Covers.

Hodgman Rubber Co., New York.

## Leggings.

Cleveland Rubber Co., Cleveland, O.  
Hodgman Rubber Co., New York.

## MACKINTOSHED GOODS.

## Mackintoshes.

[See Clothing.]

## Proofing.

Canadian Rubber Co. of Montreal.  
La Crosse (Wis.) Rubber Mills Co.  
Milford Rubber Co., Boston.  
Plymouth Rubber Co., Stoughton, Mass.

## Rain Coats.

Cravenette Co., Ltd.

## Rubber Coated Cloths.

Mechanical Fabric Co., Providence, R. I.

RUBBER  
FOOTWEAR

## Boots and Shoes.

American Rubber Co., Boston.  
Apsley Rubber Co., Hudson, Mass.  
Boston Rubber Shoe Co., Boston.  
Canadian Rubber Co. of Montreal.  
L. Candee & Co., New Haven, Ct.  
Granby Rubber Co., Granby, Quebec.  
Gutta Percha & Rubber Mfg. Co. of  
Toronto.  
Hood Rubber Co., Boston.  
Liverpool Rubber Co., Liverpool, Eng.  
Lycorning Rubber Co., Williamsport, Pa.  
Meyer Rubber Co., New York.  
National India Rubber Co., Boston.  
North British Rubber Co., Ltd., Edin-  
burgh.  
United States Rubber Co., New York.  
Wales-Goodyear Rubber Co., Boston.  
Woonsocket Rubber Co., Providence.

## Heels and Soles.

Boston Woven Hose & Rubber Co.  
Canadian Rubber Co. of Montreal.  
Continental Caoutchouc & Gutta-percha  
Co., Hanover.  
Plymouth Rubber Co., Stoughton, Mass.

## Tennis Shoes.

American Rubber Co., Boston.  
Boston Rubber Shoe Co., Boston.  
Granby Rubber Co., Granby, Quebec.  
Liverpool Rubber Co., Liverpool, Eng.  
National India Rubber Co., Providence.  
United States Rubber Co., New York.

## Tennis Soles.

Canadian Rubber Co. of Montreal.  
Jos. Stokes Rubber Co., Trenton, N. J.

## Wading Pants.

Canadian Rubber Co. of Montreal.  
Hodgman Rubber Co., New York.

SPORTING  
GOODS

## Foot Balls.

Canadian Rubber Co. of Montreal.  
Cleveland Rubber Co., Cleveland, O.  
Faultless Rubber Co., Akron, Ohio.  
B. F. Goodrich Co., Akron, O.  
Hodgman Rubber Co., New York.

## Golf Balls.

Boston Belting Co., Boston.  
Boston Rubber Co. of Montreal.  
Davidson Rubber Co., Boston.  
B. F. Goodrich Co., Akron, O.  
Whitman & Barnes Mfg. Co., Akron, O.

## Submarine Outfits.

Hodgman Rubber Co., New York.

## Sporting Goods.

Canadian Rubber Co. of Montreal.  
Faultless Rubber Co., Akron, Ohio.  
B. F. Goodrich Co., Akron, O.  
Hodgman Rubber Co., New York.  
Tyer Rubber Co., Andover, Mass.

## Striking Bags.

Canadian Rubber Co. of Montreal.  
Faultless Rubber Co., Akron, Ohio.  
B. F. Goodrich Co., Akron, O.  
Pure Gum Specialty Co., Barberton, O.

## Dental Gum.

American Hard Rubber Co., New York.  
Cleveland Rubber Co., Cleveland, O.  
Tyer Rubber Co., Andover, Mass.

DENTAL AND  
STAMP RUBBER

## Rubber Dam.

Cleveland Rubber Co., Cleveland, O.  
Davol Rubber Co., Providence, R. I.  
Hodgman Rubber Co., New York.  
Tyer Rubber Co., Andover, Mass.

## Stamp Gum.

Mattson Rubber Co., New York.  
Mechanical Rubber Co., Chicago, Ill.  
N. J. Car Spring & Rubber Co., Jersey  
City, N. J.  
New York Belting & Packing Co., N. Y.

## ELECTRICAL

## Electrical Supplies.

American Hard Rubber Co., New York.  
Lake Shore Rubber Co., Erie, Pa.  
Joseph Stokes Rubber Co., Trenton, N. J.  
Massachusetts Chemical Co., Boston.  
Tyer Rubber Co., Andover, Mass.

## Friction Tape.

Boston Belting Co., Boston.  
Boston Woven Hose & Rubber Co.  
Canadian Rubber Co. of Montreal.  
Cleveland Rubber Co., Cleveland, O.  
B. F. Goodrich Rubber Co., Akron, O.  
Massachusetts Chemical Co., Boston.  
Mechanical Rubber Co., Chicago.  
Home Rubber Co., Trenton, N. J.  
Revere Rubber Co., Boston-New York.  
Whitman & Barnes Mfg. Co., Akron, O.

## Hard Rubber Goods.

American Hard Rubber Co., New York.  
Canadian Rubber Co. of Montreal.  
Joseph Stokes Rubber Co., Trenton, N. J.

## Insulating Compounds.

Canadian Rubber Co. of Montreal.  
Gutta-Percha & Rubber Mfg. Co., To-  
ronto.  
Massachusetts Chemical Co., Boston.

## Insulated Wire and Cables.

National India Rubber Co., Providence.

## Splicing Compound.

Home Rubber Co., Trenton, N. J.

## MISCELLANEOUS

## Architect and Engineer.

Herbert S. Kimball, Boston.

## Cement (Rubber).

Boston Belting Co., Boston.  
Canadian Rubber Co. of Montreal.  
B. F. Goodrich Co., Akron, O.  
Manhattan Rubber Mfg. Co., New York.  
N. J. Car Spring & Rubber Co., Jersey  
City, N. J.  
New York Belting & Packing Co., N. Y.

## Chemical Analyses.

Durand Woodman, Ph. D., New York.  
H. L. Terry, Manchester, England.

## Chemists.

Stephen P. Sharples, Boston, Mass.  
Durand Woodman, Ph. D., New York.

## Investments.

Badger Mexican Plantation Co., Racine,  
Wis.  
Conservative Rubber Production Co.,  
San Francisco.  
Hidalgo Plantation and Commercial  
Co., San Francisco.

## Rubber Lands For Sale.

O. H. Harrison, San Francisco.

## Rubber Planting.

Badger Mexican Plantation Co., Racine,  
Wis.  
Conservative Rubber Production Co.,  
San Francisco.  
Hidalgo Plantation and Commercial  
Co., San Francisco.

## Rubber Tree Seeds.

J. P. William & Bros., Hereratzoda,  
Ceylon.

## Thermometers.

Hohmann & Maurer Mfg. Co., Roches-  
ter, N. Y.

## Travel.

Hamburg-American Line, New York.



## MACHINERY AND SUPPLIES FOR RUBBER MILLS.

RUBBER  
MACHINERY

## Acid Tanks.

Birmingham Iron Foundry, Derby, Ct.

## Ball Making Machine.

H. Bestorff, Hanover, Germany.

## Band Cutting Machine.

A. Adamson, Akron, O.  
Birmingham Iron Foundry, Derby, Ct.

## Belt Folding Machines.

Birmingham Iron Foundry, Derby, Ct.  
Farrel Foundry & Mach. Co., Ansonia, Ct.

## Belt Slitters.

Birmingham Iron Foundry, Derby, Ct.  
Farrel Foundry & Mach. Co., Ansonia, Ct.

## Belt Stretchers.

Birmingham Iron Foundry, Derby, Ct.  
Farrel Foundry & Mach. Co., Ansonia, Ct.  
Hoggson & Pettis Mfg. Co., New Haven, Ct.

## Blowers.

B. F. Sturtevant Co., Boston.

## Boilers.

William R. Thropp, Trenton, N. J.

## Braidiers.

New England Butt Co., Providence, R. I.

## Buckles.

The Weld Mfg. Co., Boston.

## Calenders.

Birmingham Iron Foundry, Derby, Ct.  
Farrel Foundry & Mach. Co., Ansonia, Ct.  
Textile-Finishing Machinery Co., Providence, R. I.

## Castings.

A. Adamson, Akron, O.  
Birmingham Iron Foundry, Derby, Ct.  
Farrel Foundry & Mach. Co., Ansonia, Ct.

## Chucks (Lathe).

Hoggson &amp; Pettis Mfg. Co., New Haven, Ct.

## Churns.

American Tool &amp; Machine Co., Boston

## Cloth Dryers.

Birmingham Iron Foundry, Derby, Ct.  
Farrel Foundry & Mach. Co., Ansonia, Ct.

## Clutches.

Farrel Foundry &amp; Mach. Co., Ansonia, Ct.

## Crackers.

Birmingham Iron Foundry, Derby, Ct.

## Devulcanizers.

Birmingham Iron Foundry, Derby, Ct.  
Edred W. Clark, Hartford, Ct.  
William R. Thropp, Trenton, N. J.

## Dies.

Hoggson &amp; Pettis Mfg. Co., New Haven, Ct.

Holmes Bros., Chicago, Ill.

## Doubling Machines.

American Tool &amp; Machine Co., Boston.

## Drying Apparatus.

B. F. Sturtevant Co., Boston.

## Drying Machines.

Joseph P. Devine, Buffalo, N. Y.  
Birmingham Iron Foundry, Derby, Ct.  
Textile-Finishing Machinery Co., Providence, R. I.

## Dynamoes.

B. F. Sturtevant Co., Boston.

## Embossing Calenders.

Textile-Finishing Machinery Co., Providence, R. I.

## Engines.

B. F. Sturtevant Co., Boston.

William R. Thropp, Trenton, N. J.

## Engraving Roll.

Hoggson &amp; Pettis Mfg. Co., New Haven, Ct.

## Exhaust Fans and Heads.

B. F. Sturtevant Co., Boston.

## Factory Construction.

Herbert S. Kimball, Boston.

## Fans (Electric).

B. F. Sturtevant Co., Boston.

## Fans (Exhaust and Ventilating).

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## RUBBER MACHINERY.

## Gearing.

Birmingham Iron Foundry, Derby, Ct.  
Farrel Foundry & Mach. Co., Ansonia, Ct.

## Generating Sets.

B. F. Sturtevant Co., Boston.

## Grinders.

Birmingham Iron Foundry, Derby, Ct.  
Farrel Foundry & Mach. Co., Ansonia, Ct.

William R. Thropp, Trenton, N. J.

## Hangers.

Farrel Foundry &amp; Mach. Co., Ansonia, Ct.

## Heating Apparatus.

B. F. Sturtevant Co., Boston.

## Hose Covering Machines.

New England Butt Co., Providence, R. I.

## Hose Making Machines.

Birmingham Iron Foundry, Derby, Ct.

## Hose Wrapping Machines.

A. Adamson, Akron, Ohio.  
Birmingham Iron Foundry, Derby, Ct.

## Hydraulic Accumulators.

Birmingham Iron Foundry, Derby, Ct.  
Farrel Foundry & Mach. Co., Ansonia, Ct.

## Lasts (Rubber Shoe).

Middlesex Last Co., Boston.

## Lathes—Hard Rubber.

A. Adamson, Akron, Ohio.

## Lathes—Jar Ring.

A. Adamson, Akron, Ohio.  
Birmingham Iron Foundry, Derby, Ct.

William R. Thropp, Trenton, N. J.

## Machinists' Tools.

Hoggson &amp; Pettis Mfg. Co., New Haven, Ct.

## Mechanical Draft.

B. F. Sturtevant Co., Boston.

## Mixers.

Birmingham Iron Foundry, Derby, Ct.  
Farrel Foundry & Mach. Co., Ansonia, Ct.

William R. Thropp, Trenton, N. J.

## Motors (Electric).

B. F. Sturtevant Co., Boston

## Moulds.

A. Adamson, Akron, Ohio.  
Birmingham Iron Foundry, Derby, Ct.

Hoggson &amp; Pettis Mfg. Co., New Haven, Ct.

## Pillow Blocks.

Farrel Foundry &amp; Mach. Co., Ansonia, Ct.

## Post Hangers.

Farrel Foundry &amp; Mach. Co., Ansonia, Ct.

## Presses (for Rubber Work.)

A. Adamson, Akron, O.  
Birmingham Iron Foundry, Derby, Ct.

Boomer &amp; Boschert Press Co., Syracuse, N. Y.

## Pumps.

Birmingham Iron Foundry, Derby, Ct.  
Boomer & Boschert Press Co., Syracuse, N. Y.

Farrel Foundry &amp; Mach. Co., Ansonia, Ct.

## Racks for Boot and Shoe Cars.

Hoggson &amp; Pettis Mfg. Co., New Haven, Ct.

## Reducing Valves.

Mason Regulator Co., Boston.

## Rollers.

Birmingham Iron Foundry, Derby, Ct.  
Farrel Foundry & Mach. Co., Ansonia, Ct.

## Rollers (Hand).

Hoggson &amp; Pettis Mfg. Co., New Haven, Ct.

Holmes Bros., Chicago, Ill.

## Rubber Covering Machines.

New England Butt Co., Providence, R. I.

## Separators.

Turner, Vaughn &amp; Taylor Co., Cuyahoga Falls, Ohio.

## Shafting.

Birmingham Iron Foundry, Derby, Ct.  
Farrel Foundry & Mach. Co., Ansonia, Ct.

## Special Rubber Machinery.

Wellman Sole Cutting Machine Co., Medford, Mass.

## Spreader.

American Tool &amp; Machine Co., Boston

## Spreading Machines.

Birmingham Iron Foundry, Derby, Ct.  
New England Butt Co., Providence, R. I.

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New England Butt Co., Providence, R. I.

## RUBBER MACHINERY.

## Steam Traps and Specialties.

Jenkins Bros., New York.  
Mason Regulator Co., Boston.

B. F. Sturtevant Co., Boston.

## Steel Stamps.

Hoggson &amp; Pettis Mfg. Co., New Haven, Ct.

## Stitchers (Hand).

Hoggson &amp; Pettis Mfg. Co., New Haven, Ct.

## Strip Covering Machines.

Holmes Bros., Chicago, Ill.  
New England Butt Co., Providence, R. I.

## Strip Cutters.

New England Butt Co., Providence, R. I.

## Thermometers.

Hohmann &amp; Maurer Mfg. Co., Rochester, N. Y.

## Tubing Machines.

A. Adamson, Akron, O.  
Edred W. Clark, Hartford, Ct.Holmes Bros., Chicago, Ill.  
John Royle & Sons, Paterson, N. J.

## Vacuum Drying Chambers.

Joseph P. Devine, Buffalo, N. Y.

## Varnishing Machines.

Birmingham Iron Foundry, Derby, Ct.

## Ventilating Fans.

B. F. Sturtevant Co., Boston.

## Vulcanizers.

Birmingham Iron Foundry, Derby, Ct.  
Farrel Foundry & Mach. Co., Ansonia, Ct.

William R. Thropp, Trenton, N. J.

## Washers.

Birmingham Iron Foundry, Derby, Ct.  
Farrel Foundry & Mach. Co., Ansonia, Ct.

William R. Thropp, Trenton, N. J.

Turner, Vaughn &amp; Taylor Co., Cuyahoga Falls, Ohio.

## Wire Insulating Machines.

New England Butt Co., Providence, R. I.

## Wrapping Machines.

A. Adamson, Akron, O.  
Birmingham Iron Foundry, Derby, Ct.

Birmingham Iron Foundry, Derby, Ct.

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Birmingham Iron Foundry, Derby, Ct.

## FACTORY SUPPLIES.

## Crude Rubber.

George A. Alden &amp; Co., Boston.

A. W. Brunn, New York.

Hagemeyer &amp; Brunn, New York.

Hirsch &amp; Kaiser, Inc., New York.

Rubber Trading Co., New York-Boston.

## Drills.

J. H. Lane &amp; Co., New York.

J. H. Lane &amp; Co., New York.

## Fossil Flour.

Fossil Flour Co., New York.

## Gilsonite.

Barber Asphalt Paving Co., Philadelphia.

## Gutta-Percha.

George A. Alden &amp; Co., Boston.

Rubber Trading Co., New York-Boston

Boston Woven Hose &amp; Rubber Co.

William Yerdon, Fort Plain, N. Y.

Hose Pipes, Nozzles &amp; Couplings.

Boston Woven Hose &amp; Rubber Co.

Eureka Fire Hose Co., New York.

Revere Rubber Co., Boston.

Hydro-Carbon Products.

Geo. A. Alden &amp; Co., Boston.

Infusorial Earth.

Stamford (Conn.) Rubber Supply Co.

Lampblack.

Samuel Cabot, Boston.

Lawn-Hose Supporters.

C. J. Bailey &amp; Co., Boston.

Lead—Blue.

Picher Lead Co., Chicago, Ill.

Lead—Sublimed White.

Picher Lead Co., Chicago, Ill.

Naphtha.

Barrett Mfg. Co., Philadelphia.

Oils.

Akron Commercial Co., Akron, O.

Paris White and Whiting.

H. F. Taintor Mfg. Co., New York.

Reclaimed Rubber.

Alkali Rubber Co., Akron, Ohio.

Bloomingdale (N. J.) Soft Rubber Co.

E. H. Clapp Rubber Co., Boston, Mass.

New Jersey Rubber Co., Lambertville, N. J.

Pequanoe Rubber Co., Butler, N. J.

Philadelphia Rubber Wks., Philadelphia.

Jos. Stokes Rubber Co., Trenton, N. J.

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E. H. Clapp Rubber Co.

MANUFACTURERS

OF ALL KINDS OF

RECLAIMED  
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MINNEAPOLIS, MINN., 322-324 First Ave., North.  
NEW ORLEANS, LA., 410 Carondelet Street.  
SAN FRANCISCO, CAL., 527 Market Street.

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*Mention The India Rubber World when you write*

# HIGH GRADE RUBBER GOODS

(MADE IN CANADA)

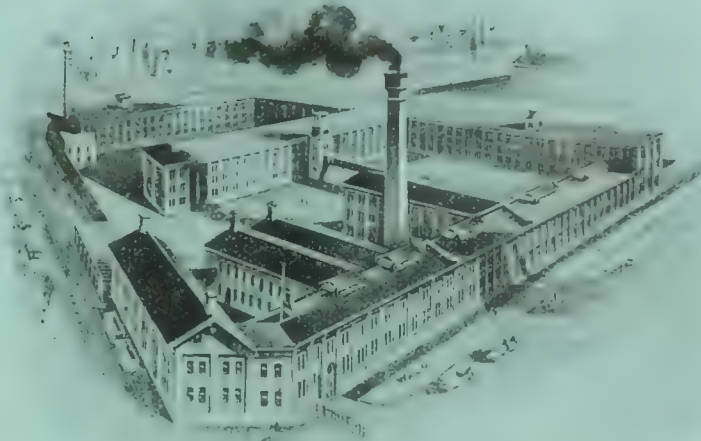
**BELTING  
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and  
GASKETS**

**RUBBER HOSE**

—FOR—

**WATER  
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STEAM  
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**SATISFACTORY  
.. IN ..  
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**SUPERIOR  
.. IN ..  
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Sole Manufacturers of the celebrated "MALTESE CROSS" and "LION" Brands Rubbers.  
The best fitting, best wearing and most stylish rubber footwear on the market.

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## The Gutta Percha & Rubber Mfg. Co. of Toronto, Ltd.

Temporary Offices—15 East Wellington St., TORONTO, CANADA.

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# GRANBY RUBBER CO.

—HIGHEST GRADE—

## RUBBER BOOTS, SHOES, AND CLOTHING.

### Factories: GRANBY, QUEBEC.

**S. H. C. MINER,** President,  
**J. H. McKECHNIE,** Gen'l Mgr.

Mention *The India Rubber World* when you write.

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AND THE  
PROCESS FOR THE MANUFACTURE  
OF

## RUBBER TOY BALLS

(United States Patent No. 689,157—Dec. 17, 1901)

### IS FOR SALE

The Machine Can Be Inspected In Operation

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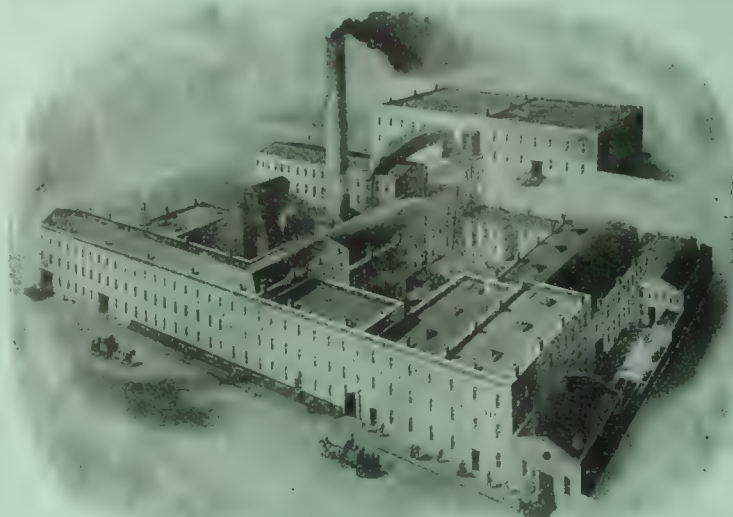
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# INDIA RUBBER WORLD

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DICHOPSIS GUTTA

GUTTA-PERCHA

Edited by HENRY C. PEARSON—Offices, No. 150 Nassau Street, NEW YORK.

Vol. XXXI. No. 5.

FEBRUARY 1, 1905.

85 Cents a Copy.  
\$8.00 Per Year.

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(MADE IN CANADA)

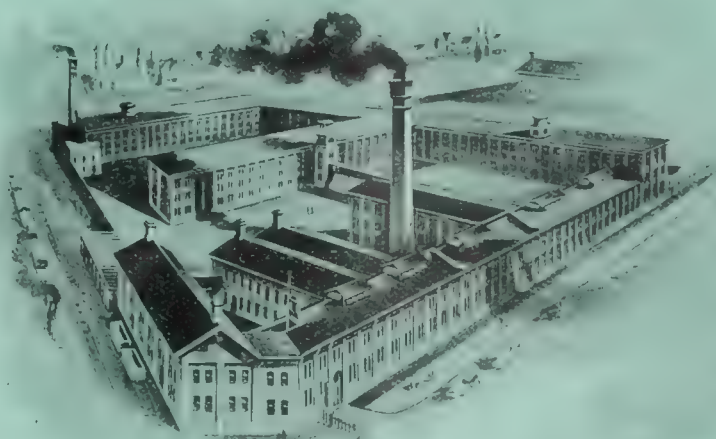
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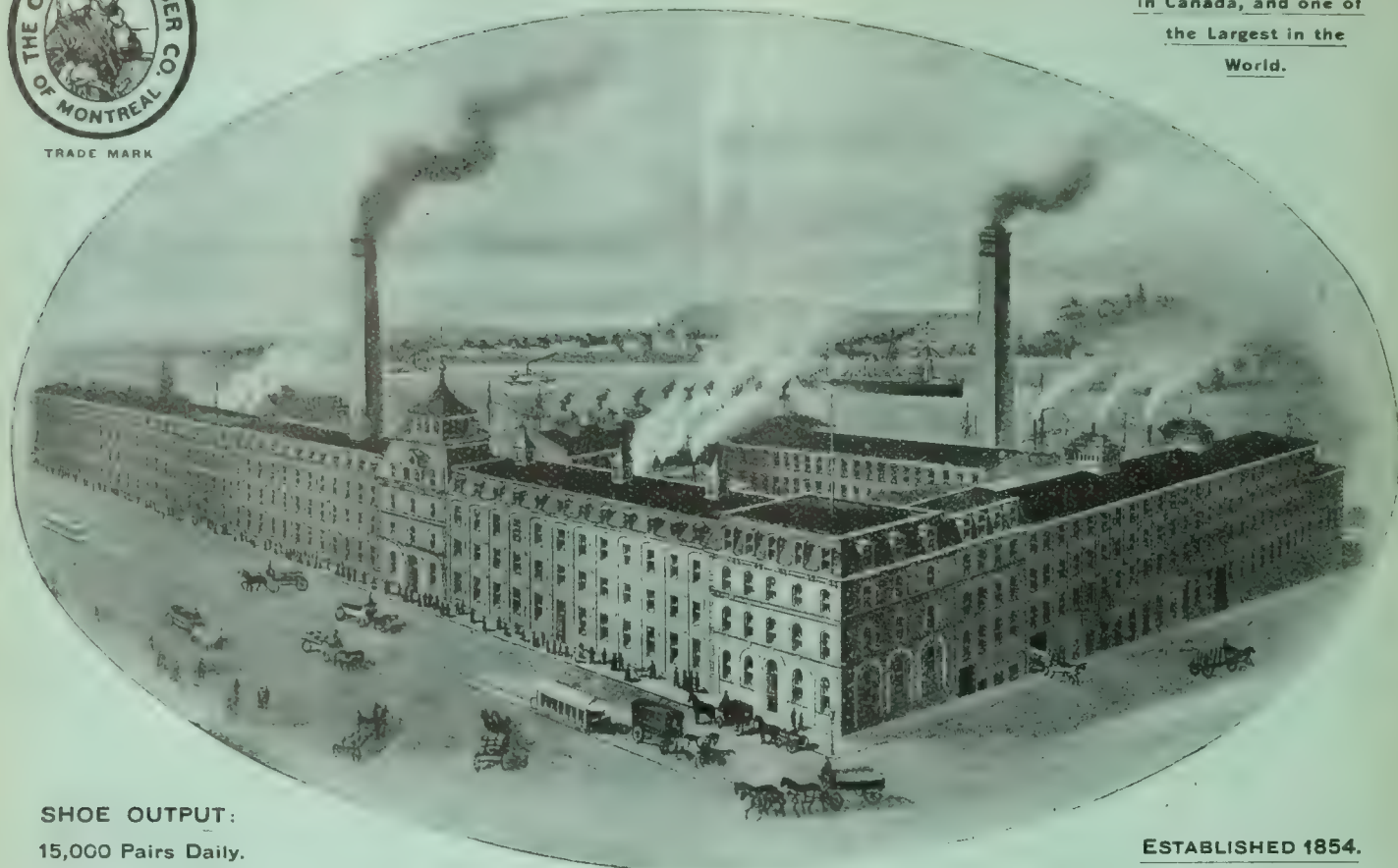
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COTTON and LINEN HOSE of all grades, both plain and rubber-lined. All sizes.

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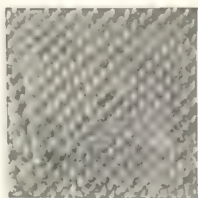
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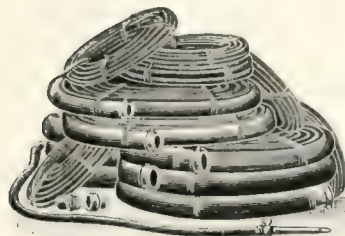
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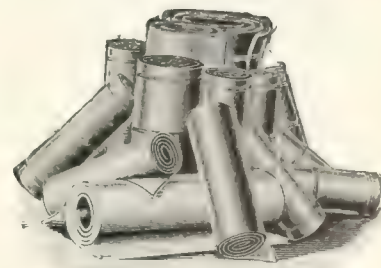
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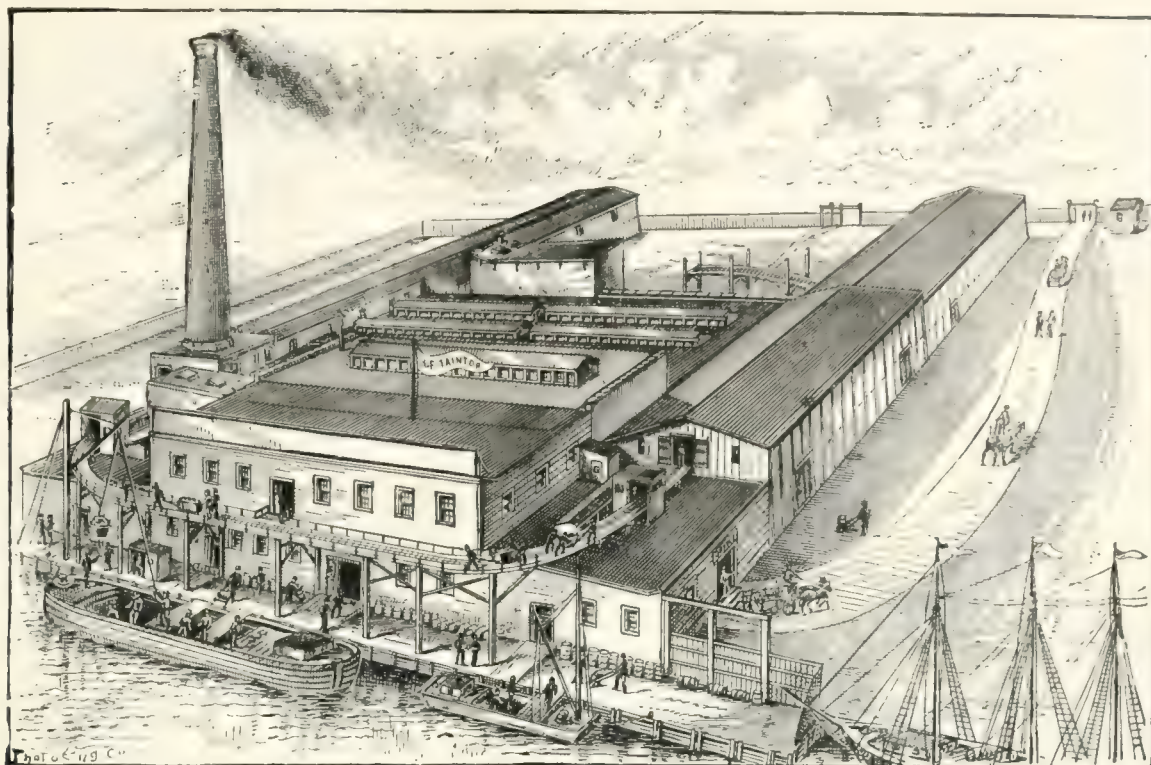
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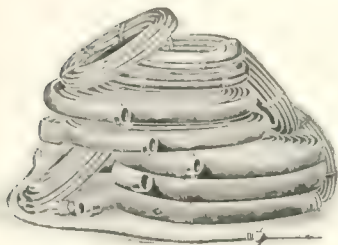
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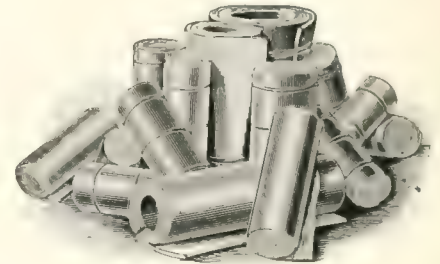
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Air Brake Hose Rubber Belting  
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"Red Oak" Sheet Packing  
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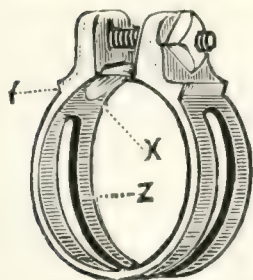
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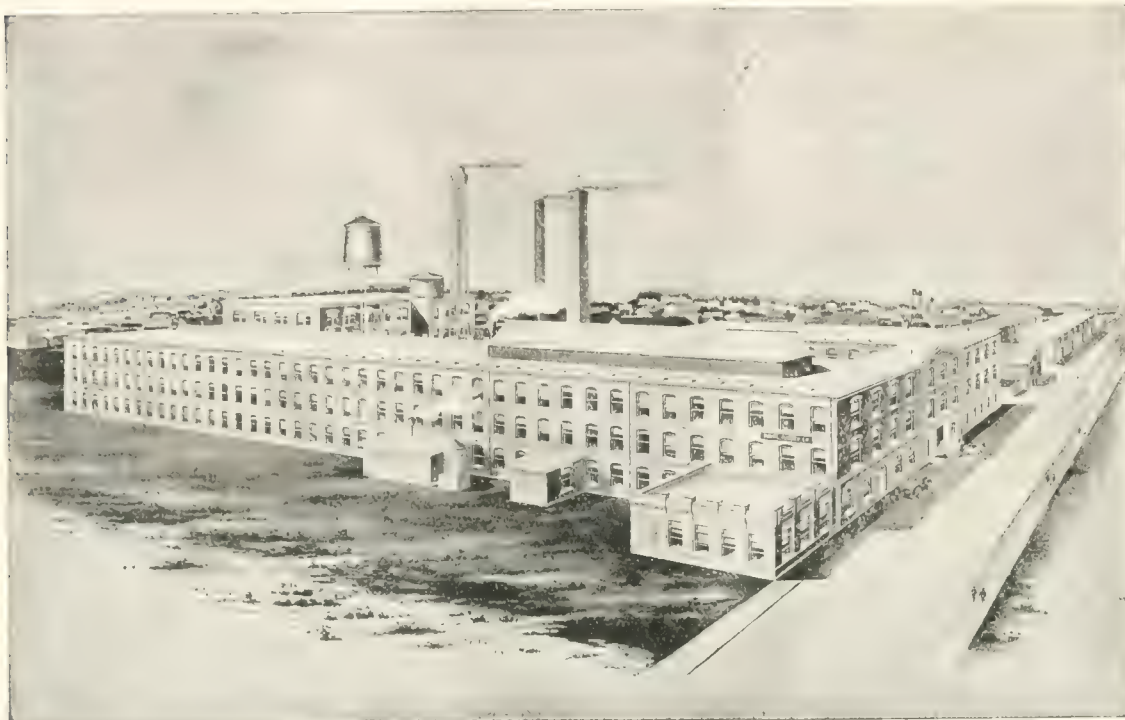
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Syringes,  
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EVERY DESCRIPTION OF HARD RUBBER GOODS.

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RUBBER BALLS  
PURE RED RUBBER TOYS  
RUBBER COMBS and  
RUBBER SUNDRIES

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	PER DOZ.		PER DOZ.		PER DOZ.
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" " Complexion "	4.00	" " Sewing Fingers, 3.50 gro.		" " Mas'ge Roller,	4.00 doz.
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" " Hand "	4.00	" " Soap Dishes,	2.00	" Complexion Soap,	.75 doz.
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" " Tooth " No. 1,	2.00	" " Bubble Blower,	.75		

Bailey's "Won't Slip" Crutch Tip, (all sizes) \$1.00 per doz.

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Size 3 x 5 in.

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Always in the lead. Made on  
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A most important feature. We  
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## THE OUTLOOK FOR SYNTHETIC RUBBER.

THE statement that the late Dr. Carl Otto Weber believed that in five years, had his life been spared, he could have discovered synthetic rubber, brings again before the trade, particularly those who are investing in rubber planting, the fear that a true substitute for India-rubber is a possibility, perhaps an imminent one.

Taking up the learned chemist's statement as it stood, and allowing him to be able to solve so wonderful a problem, the results in a commercial way could hardly have been felt for many years after the discovery, and possibly never. No great industry can be revolutionized in a day, or a year. If synthetic rubber were discovered to-day, its progress would be like that of synthetic indigo, a series of experiments covering years before the product could be produced economically enough to warrant its manufacture on a large scale.

A review of all the so called "rubber substitutes" in the field to-day does not bring to light one that anywhere near approaches even a poor grade of India-rubber in its unique and most valuable feature—that of resiliency. As assistants to rubber in compounding there are many valuable substitutes, but used alone, where elasticity is required, they are useless.

Taking up a minor virtue of India-rubber, that of plasticity, with perhaps insulating or waterproof qualities added, there have been rubber substitutes. That is, rubber has been entirely superseded by new compounds. For example, a German casein compound has been, and is used, under the name "Galalith," in the manufacture of certain grades of goods that take the place of hard rubber, and that answer the purpose very well. So too, the artificial leathers of the "Pantasote" class, that contain no rubber at all, are plastic and waterproof and would pass for high grade rubber surface work to all but the initiated. Still further, when the question of plasticity, insulating, and waterproof qualities are needed to take the place of India-rubber and Gutta-percha in the insulation of wires and cables, the erection of factories in Germany, England, and France for the production of an "artificial Gutta-percha" containing no rubber or gutta shows a perfect substitute, as far as the qualities named are concerned.

The preceding review fairly epitomizes the progress of the search for a substitute to the present time. They are of distinct value to the rubber trade, and it is to be hoped that many others may soon be added to the list.

For example, stickiness is a very valuable feature of rubber. If there were a substitute for "friction" that would hold together plies of cloth as well as a high grade vulcanized friction gum, it would at once find a large field of usefulness. Were it an ideal sticker it might also be of use in the general cement trade. To sum up, then, real synthetic rubber is as far off as ever, but products that may be successfully substituted for rubber—in certain fields—are already in use, and doubtless others will be developed. But meanwhile the demand for natural rubber constantly grows, for the production of goods in which no "substitute" has ever been found to serve.



Speaking of substitutes, it must not be forgotten that nature furnishes many of these, a good example being Gutta-jelutong, or Pontianak, which is plastic and sticky, and has found a very large and useful place in rubber manufacture. Although we know that there are many such gums, very few of them seem to come to the market in any particular quantity. For example, all through the Fiji archipelago there grows a type of *Ficus* which gives out *latex* abundantly, the gum being used by the natives for birdlime. In 1877 some of this was valued by a rubber man in England at 50 cents a pound. Then too, there is the so-called "cow tree," which is plentiful all through tropical South America, the milk containing considerable India-rubber, although it is quite resinous. In 1872 the American consul at Buenos Aires reported on what he called "mangaice" rubber, which he said was very abundant, but nothing more has been heard of it. At the present price of crude rubber would it not profit our friends in that enterprising republic to put some of this on the market? In addition to this there are a great variety of the *Artocarpus* and *Euphorbia* families, which produce low grade gums.

In looking over the list of little known gums there are something like fifty that from reports should be as valuable at least as Pontianak, and there would seem to be a fine opportunity for tropical traders to get them now before rubber manufacturers on a commercial scale.

THE AMENDMENT OF THE CHINESE EXCLUSION LAW so as to permit the utilization of Chinese laborers into the Hawaiian islands, is urged by Governor Carter, of the territory of Hawaii, in his annual report to the secretary of the interior. He says that the natives will not work in the fields and that the Americans cannot, and that planting industries are threatened. The governor is a wise man and has put his finger on a vital spot concerning the development of our tropical possessions. With thousands of acres of most fertile rubber lands in the Philippines, we have no rubber plantations, for just the reason he cites. The natives won't work, and yet right within call are the Japanese, Chinese, and Javanese coolies—enough to raise rubber for the whole world. The same is true of Porto Rico, in a lesser degree. The exclusion act should be made void as far as it relates to our tropical possessions.

THE SCOFFER IS CONSTANTLY HEARD to remark that rubber shoes do not wear as well as they used to, or that it is doubtful if they contain any rubber at all. If the critic is elderly, attention is also drawn to the old fashioned gum shoes that were all rubber and never wore out. Without dwelling on the fact that if there was a market for the ancient type of shoe they would be easily furnished, it ought to be brought home to these faultfinders that the present high price of rubber is largely due to the enormous consumption of the gum by the companies that manufacture rubber shoes, and further, if it were possible for them to make rubber footwear with no rubber, they would be particularly glad to have the secret imparted to them, and at once.

THE CRITICAL AND OFTTIMES INTOLERANT New York *Evening Post* asserts that "The experiment of raising Pará rubber in Ceylon has not so far been successful, partly because deer and pigs eat the seedlings; but by planting out two-year-

old plants it is hoped that this difficulty may be overcome." The truth is, the planters in Ceylon have suffered very little from creatures that eat the seedlings, the real trouble having appeared in the Federated Malay States. That, however, it was not at all serious, the 20,000,000 growing trees, some of which are producing rubber, abundantly testify. It is possible, of course, that the editor of the *Evening Post* had it in mind that Ceylon was in the Malay states, being touched by that sort of geographical inaccuracy which led a newspaper man to inquire of the editor of this Journal if Porto Rico was the capital of Costa Rica.

THE UNUSUAL SHOE WINTER that has been so well inaugurated by the clerk of the weather, has after all its bright side. It will mean the accumulation of many thousands of tons of old shoes, and a consequent increased supply of reclaimed rubber; a point of considerable interest to rubber manufacturers in almost every line.

### NEW TRADE PUBLICATIONS.

THE PNEUMATIC TYRE AND THE MOTOR CAR, 1894-1904. THE INFLUENCE OF Pneumatic Tyres in the Evolution of the Motor Car. Issued by Michelin & Cie., Clermont-Ferrand [France]. 1904. [6½" x 9". 48 pages.]

TIME was when the indolent monarchs of France rode in state through the streets of Paris in coaches dragged by "harnessed oxen, with calm and tranquil step." Great have been the changes in transportation methods and facilities since those days, but the greatest of all has been the development, almost within a decade, of the automobile—a class of vehicle for which France is entitled to a special degree of credit. The automobile as we know it would have been impossible without the pneumatic tire, and the booklet before us is of interest in recording the history of the great long distance races which concentrated public attention upon the new means of locomotion, and impelled manufacturers both of vehicles and tires to their best efforts. The Michelin firm, as tire makers, contributed very largely, as everybody knows, to the practical successes attained in France, and repeated later elsewhere.

\* \* \*

THE DIAMOND RUBBER CO. (Akron, Ohio) issue a booklet, "The Diamond Book of Instruction and Catalogue of Automobile Tires," which is not only one of the handsomest trade publications of the season, but is very much more readable than any mere catalogue. By way of introduction are a few pages of tire history, referring to the Diamond company as the pioneer manufacturers of pneumatic tires in America. Next is a summary of the processes of tire manufacture, which will serve to impress the user with the importance of the utmost care in order to secure the best results from tires. In the catalogue section it will be seen that the Diamond company make practically every type of pneumatic tires used on automobiles. The remaining pages are filled with useful information on removing and applying tires, and making repairs, in connection with which are a number of appropriate illustrations. [5" x 7". 64 pages.]

\* \* \*

GEORGE BORGFELDT & Co. (New York) issue a handsome brochure relative to the increase of space in their already large premises, devoted to the import of several important lines of goods, including rubber goods, toys, and druggists' sundries. It is expected that the 1905 display will be complete and ready for inspection about February 1. The firm are sole agents in the United States and Canada for the Hanover Rubber Co., Limited, of Hanover, Germany. [6" x 7". 12 pages.]

## AN ENGLISH OPINION OF AFRICAN RUBBERS.

TO THE EDITOR OF THE INDIA RUBBER WORLD: The "sweating," or as we call it in this country, "heating," of Congo rubbers referred to by Mr. A. D. Thornton in his interesting letters in your October and December issues is only too well known here. It is not confined to rubbers specifically known as coming from the Congo, but occurs more or less in all second and low grade Africans, coming from Liberia round to Madagascar.

Both the "heating" and the "falling" in the drying room referred to by Mr. Thornton are due (1) to the decomposition of albumenoid matter in wet rubbers and improperly coagulated rubbers, and (2) to the melting at comparatively low temperatures of the various resins which are contained in all rubber without exception, but which occur in superabundance in these low Africans. A large percentage of resin may be present in a rubber which shows no excessive decomposition of albumenoid. But so far as I am aware marked decomposition is always accomplished by large amounts of resin of specially low melting point.

Confining ourselves to these African rubbers, one finds on purchasing a "lot"—it may be merely one cask—that it consists of sundry smaller lots collected and coagulated by different men or gangs of men, one more careless than another, or, it may be, using a different coagulating process. Hence one finds that the amount of decomposition and the percentage of resin varies from ball to ball, and from cask to cask, of the consignment. Also, no two consignments are alike. It is decidedly the old Roman law of *caveat emptor*, with a vengeance. The proper thing for the rubber man to do is to have every consignment, as it reaches the works, carefully graded by some responsible person into at least two qualities and, keeping a careful eye on their behavior in the drying room, to arrange for the drugman to weigh out definite proportions of the worse with the better, and to add to these a definite proportion of some other rubber to leaven the lot before compounding.

The best course of all that one could adopt is to let these rubbers severely alone. They are always more or less a nuisance and a danger to one's peace of mind by reason of their variability. It is true, that, when correctly vulcanized, they do not necessarily decompose *per se*, and they are quite suitable for common molded goods. But the "cure" requires some watching.

They are not, however, worth the prices they fetch in open market at the present time, and the price ratio which they bear to Pará should be very much less than it has stood at for a number of years. In fact, the game is scarcely worth the candle, as, apart from the risk and annoyance which they are liable to give in the works, their true "Caoutchouc contents" compares most unfavorably for cost with that of Pará fine, whilst it is worth very much less. A good compounder can turn out rubbers quite as good for the money, and with less worry to himself by working with more reliable material.

To put the matter in a nutshell, then, the rubbers of commerce contain more or less of the following constituents, viz:

1. Stones, earth, sand, leaves, grass, wood, and, sometimes, dead men's bones;
2. Water;
3. Carbohydrates (sugar-like bodies);
4. Nitrogenous matter (albumenoid);
5. Resin or resins (M. P. varying from 20° to 80° C.);
6. A mixture of two or more Caoutchoucs or true rubbers.

A very nice list, and one that should be impressed upon the shins (it is useless to hit him on the head) of our African brother.

Now No. 6 is all that the rubber man wants. He has no use for No. 5, except at 3s. 6d. per hundredweight or thereabouts. And he does not want the others at any price, except perhaps the stones and sand, which might be useful in the state of 100 mesh powder.

The species of plant from which the milk is drawn determines, to some extent at least, the percentage of resin (from 1 per cent. in Pará fine to 60 per cent. in African flake).

The coagulation of the milk and manipulation of the rubber before it reaches market determine the percentages of carbohydrate and albumenoid, as well as the decomposition of the latter or both.

J. CARDWELL QUINN,

Birmingham, England, December 11, 1904.

## MR. THORNTON ON AFRICAN RUBBERS.

TO THE EDITOR OF THE INDIA RUBBER WORLD: In your January edition appears a letter from Mr. Wilmer Dunbar, of the Pennsylvania Rubber Co., in which he treats on my previous letters in your Journal. He deducts from them that my object is to get an explanation of some factory troubles we may have had, but such is not the case.

My object in writing to your Journal was to find out why we cannot obtain Congo rubbers in a more stable condition—why they cannot always be free from stickiness, instead of sometimes being nice clean hard lots, and sometimes sticky and of poor quality. Again, Mr. Dunbar says that, owing to the presence of resin, these rubbers are more liable to decompose than are other rubbers. I disagree with him entirely; resins do not decompose crude rubber. Their presence may, and does, cause some oxidation, but that is quite the opposite effect of the trouble we are considering. Oxidation tends to make rubber hard and brittle—such a condition as we observe in clear resin—but most decidedly not soft and sticky; otherwise we would be afraid to use Almeida, Tuno, and Pontianak gums.

Again, let us look for a moment at a bag of African rubber; some of it is hard and strong, the next ball is partly sticky; further on we see a mass which is wholly sticky. With the aid of a Soxhlet extractor, using acetone as a solvent, we proceed to determine the amount of resin in each, and invariably we find them identical. Time and again have I done this, and if resin is the cause of the trouble, why is there any difference in the consistency of the several samples?

Of course I fully realize that there can be no "hard and fast rule" used with Congo rubbers, but why? That is what I want to get at. If Pará is constant, why not Congo?

My theory is that the trouble is with the gatherer, who, not realizing the importance of his work, stumbles through it in a haphazard sort of way, some of the *latex* being coagulated and some not, the latter being the cause of the decomposition, destroying the elasticity and curing properties, and quite destroying its natural tendency to swell when dissolved in benzine.

A. D. THORNTON,

[General Superintendent Canadian Rubber Co. of Montreal.]

Montreal, Canada, January 17, 1905.

A RUBBER manufacturer in New York recently received an order which read: "Please send me one pair of thin rubber gloves for a lady weighing about 130 pounds," and being a conscientious merchant, he at once set about getting vital statistics. Figuring that a 130 pound female of large frame, who was thin, and who daily manipulated a rubbing board, would possess an 8½ hand, and that a small-boned, petite, plump individual of the same weight, whose exercise was confined to holding a lorgnette, would have a 5½ hand, he split the difference and sent a pair of 7 and was right the first time.



## DEATH OF DR. C. O. WEBER.

THE news of the sudden death of Dr. Carl Otto Weber, which occurred at his home in Newton, Massachusetts, on Saturday evening, January 14, caused a great shock to the rubber trade. Dr. Weber had been long before the public as an expert chemist in India-rubber, but was perhaps better known in Europe than in the United States. Although he had visited this country several times, it was only two years ago that he decided to make his home here and carry on his valuable researches at his India Rubber Research Laboratory in Boston. He came primarily in the interest of the Hood Rubber Co., but did expert work for several other large corporations. In addition to this he found time to do much literary work.

Dr. Weber was born October 26, 1860, of German-Scotch ancestry, in Pforzheim, the leading manufacturing city of Baden, and spent his early life in Germany. He studied chemistry at Heidelberg and took the degree of Doctor of Philosophy in 1880. His first successful work was in the aniline color industry in which he rose to the management of a large establishment in Silesia. Becoming interested in the chemistry of India-rubber, he accepted in 1892 the position of managing chemist in the large rubber works of Isidor Frankenburg, Limited, at Manchester, England, and later became a director in that corporation. While at Manchester Dr. Weber devoted himself closely to the analysis of vulcanized India-rubber, following the line of research in which the brilliant and lamented Henriques was the pioneer.

He was a prolific contributor to technical literature in many channels, being the author of a number of papers in the transactions of the Society of Chemical Industry, and a special contributor to *The India-Rubber Journal*, of London, and the *Gummi-Zeitung*, of Dresden. His principal work, which appeared a year ago, was a treatise on the chemistry of India-rubber. He occupied the chair of physics in a college at Manchester, and was expert to the British Admiralty and the War and Colonial offices. He was elected to the presidency of the India-rubber section of the fifth International Chemical Congress, held in 1904 at Berlin.

Prior to the time when he decided to make America his home, Dr. Weber went to Panama, then a part of Colombia, and spent some months studying the methods of gathering and curing India-rubber from cultivated trees. The information obtained there was of

the utmost value, but no doubt his exposure in that malarial climate during the rainy season was a factor in shortening his life. He also went to Mexico about a year ago and investigated thoroughly the subject of securing rubber from the "guayule" plant. It is said that at the time of his death he also had under advisement a trip to Ceylon and the Malay states in the interests of certain large *Hevea* plantations there.

In addition to his work in India-rubber, Dr. Weber did much other research work which added notably to his reputation. For example, while at the "Las Cascadas" plantation, in Panama, he made hundreds of micro-photographs of malarial mosquitoes, discovering several new varieties, all of which work was given to the famous Dr. Ross and later published in the work of the latter on that subject.

He was in every sense of the word an enthusiast and rarely gave himself a moment's rest. He was a brilliant conversationalist, a forceful and easy writer, and a musician of undoubted talent. One of his ambitions was the manufacture of synthetic rubber from some simple base, such as cellulose. To this he gave much thought and study, and he is said to have expressed the belief that he could accomplish this great task within the next five years.

Dr. Weber's death was due to apoplexy, induced no doubt by the strenuous, laborious life that he led. Never a physically strong man, he demanded of a rather frail body more than it was able to accomplish. He is survived by a widow, and a son who lately entered Harvard University.

Funeral services were held in Newton, on January 17, the Rev. F. S. Hatch officiating. They were brief, but the touching and eloquent tribute paid to the memory of the departed by the clergyman will long linger in the memory of those present. There were present many members of the rubber trade as well as distinguished professional friends, while the floral tokens were abundant and beautiful. The interment took place in Newton cemetery.



THE LATE CARL OTTO WEBER, PH. D.

TRIBUTE OF THE  
NEW ENGLAND RUBBER CLUB.

WHEREAS: Death has suddenly removed from our midst our friend and fellow-member, Dr. Carl Otto Weber, we, the members of the New England Rubber Club, in token of our sincere sorrow, record the following resolutions:

*Resolved*, That in the untimely death of Dr. Carl Otto Weber, the rubber trade of the whole world has sustained a severe loss. Strong, courageous, of rare scientific and technical ability of worldwide reputation, his name will be long remembered with respect and esteem.

*Resolved*, That we extend to his family our deepest sympathy.

*Resolved*, That these Resolutions be spread on the records of the Club, and copies engrossed and sent to his family.

L. D. APSLEY, President,  
A. W. STEDMAN, Vice President,  
HENRY C. PEARSON, Secretary,  
GEORGE P. WHITMORE, Treasurer,  
E. E. WADBROOK, Assistant Secretary.

Boston, Massachusetts, January 16, 1905.

THERE were shipped from New York, early in January, six automobile street cars, of American make, to be used in the operation of a regular line at Lima, Peru. They are essentially street cars, and not omnibuses, each 18 feet in length and seating 32 passengers, with straps for those not able to find seats. The vehicles are electrically driven, equipped with solid rubber tires, and will run on the road free from rails.

## EXPLORING FOR "CASTILLOA" RUBBER IN PANAMA.

*Experiences of The Editor of "The India Rubber World."*

## THIRD AND LAST LETTER.

Camp Iguana.—Close Quarters.—Provisions Low.—Lucas Cruz.—The Forest Primeval.—Bees and Rubber.—The Natives' Horror of Gold.—A Land Without Law.—Breaking Camp.—Mountain Climbing.—At Las Minas.—The Plantation "Las Margaritas."—Fourth of July *Fiesta*.—On Board *Quattro Hermanos*.—Panama, Colon, and New York.

THE ride to Iguana, as I was saying when my last letter came to a close, was delightful. Part of the time through dense forest, where some of the trees measured 10 to 12 feet in diameter, then perhaps through an abandoned Indian farm grown up to jungle, but still producing mangos, bananas, and alligator pears—climbing hills that seemed to go straight up in the air, and sliding down others that were even straighter—frightening big iguanas and little lizards—stepping gingerly over six inch wide columns of leaf carrying ants—always on the lookout for wild pigs, deer, or turkeys to replenish our larder—the whole journey was full of variety and incident. The hut at Iguana, with a little repairing, gave us barely room to stretch out comfortably at night, and had any one man chosen to stretch himself diagonally across the pole bed there would have been no room for the rest. The hut was open on three sides, was about 9 feet wide, 7 feet high in front, and 5 feet in the rear, roofed with palm, and had an earth floor. We used our navy bags as hold-alls by day, and pillows by night, and slept beautifully, except when our feet went through the side of the hut, or a leak in the roof let in too much water upon our persons.

Our first meal there seemed the most delicious I had ever eaten. It consisted of canned smoked beef (the edges of the slices were too far spoiled to eat, but the middle was good), fried bread sweetened with condensed milk, boiled rice, and coffee. The meat was cooked over an open fire and served on big wild banana leaves. Nor shall I forget the first night—the almost deafening chirping of the crickets and tree frogs, the queer cries of the night birds, and the steady drip of the dew from the trees like a slow rain, and the fireflies, how big and beautiful they were, and how still the air was, so that the flame of the candle went straight up with never a quiver.

To assist in the exploration of this part of the tract was Lucas Cruz, an old rubber cutter, the builder of the hut in which we were installed. He had come there from across the mountains 20 years before, with his father and five brothers, and had taken out rubber ever since, selling it to the traders all the way from 20 to 40 cents a pound, silver. His figures as to the ancient yield of the trees were rather indefinite. At present, however, as the trees were smaller than of yore, he tapped about 30 trees in a day and got 6 to 7 pounds of milk, or 3 to 4 pounds of dry rubber. His system was to have a helper, one of the twain tapping while the other collected the milk in a calabash.

Under his guidance we got out very early in the morning, examined the valleys and steep hillsides in various directions, and found the *Castilloa* growing everywhere, and many a stiff climb Lucas gave us before the choice growths were reached. Afterward he explained that he only took us to the easy places, as from some where he went alone, we would never have returned alive. Even up here I found stumps of huge *Castilloas* that had been cut down to get all of the milk. The largest trees then standing did not measure more than 16 to 18 inches in

diameter, but there were many of them, and thousands of a lesser size.

Pressed later for a definite statement as to what he gathered daily when rubber hunting, Lucas said that two years before six of them had, in this region, in seven days, gathered 400 pounds of dry rubber. As they never work Sundays that would mean six days' work, that is, unless they loafed three of them, which is probable. For an experiment, we sent out four men late one morning, who were back by midday with 15¼ pounds of milk that after coagulation and drying made about 8 pounds of rubber. As they normally get 50 cents a day, silver, equal to 25 cents, gold, that was not a bad return.

It is due to the man who first told the story of bees collecting rubber *latex*, as well as the rubber itself, from the cuts in the trees, that he receive apologies of all skeptics! for the story is true. I saw hundreds in all parts of the peninsular and they not only love rubber but almost everything, and are a great nuisance in camp. What they do with the rubber, whether it goes into comb or honey, I do not know, but they certainly work most energetically in gathering it.

By cutting down a few trees on the top of a lofty ridge near camp, a fine view of the country was developed from the source of the Marieto river to the sea, the *llanos*, the Suoy river, and even the far away gulf. It was wonderful how Lucas could pick out the *Castilloa* miles away from this eyrie, and without apparent mistake either.

After a few days at Iguana we began to look anxiously for the return of the mules, for food was getting scarce, and worse than all, the coffee was nearly gone. Although signs of deer were plentiful the hunter could get none, and even parrots and monkeys were not in evidence. There was, to be sure, a land crab that the Indians caught occasionally. It was as big as a saucer, with a bright blue body, red legs, and eyes set on props an inch long. It was as giddy looking as a Chicago runabout and apparently about as edible. Just as we were tiring of rice and weak coffee the Pioneer mixed some boiled rice with condensed milk, put it in a small pan on the fire, then laid a piece of tin over the pan, and built another fire on that. An hour later we were feasting upon as fine a rice pudding as ever was cooked. And at that time the pack train appeared, and ere long we were on our way back to Rio Negro camp.

No incidents of special note occurred on the return trip. The trails were so wet from recent rains that the many humming birds, the gorgeous butterflies, and the rich tropical flowers, were hardly noted. The swarms of horseflies that swooped down upon our patient beasts could not be wholly ignored, however, and all soon became most expert in killing them. As usual, a stray starving dog appeared from nowhere and silently attached himself to our party. Although we knew he would crawl under our hammocks at night to give his fleas an opportunity to emigrate to richer pastures, he was accepted without protest. He had his virtues. Nothing could tempt him to steal, although starving—he would allow a wild pig to cut him to ribbons that the hunter might get a shot, and he was after all the friend of man.

During this ride a strange thing happened: Cruz asked what the *Americanos* used the rubber for! It was the first time in the memory of the Pioneer that any *cholo* (civilized Indian) had ever shown the slightest curiosity in that direction. I



doubt if he appreciated some of the uses described, but the making of waterproof clothing caught his fancy at once. For most of the Indians have a little bag made of cloth and coated with rubber, mixed with gunpowder, if they can spare it, to help the sun cure it. In this, or a purse made of Iguana skin, they carry flint and steel, a bit of cotton wicking with one end let into a bone extinguisher, and tobacco for cigarettes. They are a quiet, anemic race, very superstitious, and so fearful of spirits and *tigres* that if overtaken by night in the forest, climb trees and tying themselves to the limbs, remain until morning. They have a horror of gold, not the coin, but the raw material, always denying all knowledge of it, the probable reason being that the story of the cruelties of the Spanish gold seekers are still in vogue among them. There are, all told, on the 800 square miles of the Azuero lands, some 400 souls. On the other side of the mountain ranges, however, are large towns and many thousands of natives.

It took some time to appreciate that this was a land where practically no laws were operative. As the weeks passed and no word came from the outer world, and we learned that the few letters despatched to the faraway Panamanian postoffice would never reach their destination, we began to realize that this was indeed a forgotten corner of the world. The natives are all good Catholics and show their religious fervor at many *fiestas* by burning candles, exploding gunpowder, and getting drunk. In this latter state they show much energy and put up some spirited machete fights. If an *Americano* tries to patch up one of the wounded they offer no resistance, but as soon as the good Samaritan departs take off the bandages, plaster the wound with cow dung, and if the victim dies lay his death at the door of the foreigner. How well I remember the disgust of the Scout who wanted to extract a bullet that was just under the skin in the neck of a *moxo* whom the alcalde had shot for some misdemeanor.

"Why it's only under the skin; it will almost roll out," he exclaimed in Spanish.

But they would not allow the skin to be cut, although they did prop the sufferer up, heels in the air and head to the ground, and watched all night to see the bullet as it rolled out.

Of the thousands of shell mounds that contain the graves of their ancestors the natives know little, and cheerfully assist the despoiler to open them and secure such relics or treasure as they may contain.

The women are quite pretty when young, particularly those who live in the mountains, and have a custom of filing their teeth so that the points are as sharp as needles, said to be most becoming, from an Indian point of view. The mountain men who are physically the best Indian specimens, wear only a shirt and a pair of pants cut off at the knees, and are known in the lowlands as the "short pants."

That night in Rio Negro camp it was really cold, the air was damp, it was raining heavily, although only a little came through the roof, and we were sitting about too grumpy to talk until the

gray mule took possession of the kitchen, and, in the mix-up that followed, led us to forget our woes. Then the Prospector began to talk about rubber plantations, and my conceit got a shock, for he told me of some that I had never heard of. It was on Gorgonas island, which lies off the coast of Colombia, owned by the fine old Spaniard, Don Raimon, whom we met in Panama city, where are some 5000 cultivated trees 4½ years old. The Prospector feared that the revolutionists from the main land might have destroyed some of them in their periodic forays, but was not sure. Then the Pioneer took the floor. He had formerly been manager for the Darien Gold Mining

Co. and for them cleared wide paths through the forest in which to plant *Castilloa* trees. The planting was in part from seed, and in part of young trees for which he paid the natives \$5 a hundred, in silver. This was in 1900, and there were some 300,000 trees on land some miles from the coast planted at an altitude of 1500 feet. Since leaving the company his successor had planted certainly as many more.

The trips that I have outlined are a few of many, long and short, that taken as a whole gave me a knowledge of the lands as a whole. The final journey was to be along the "hog backs" that

extended up to the mountains, then over them and down to the further shore, whence the *Almirante* had been despatched to meet and convey us to Panama city.

First came the preparations, most important of which was the packing of the camera supplies. Considering the fact that the mule that bore this precious load always fell down when crossing a river, and that the searching dampness of the atmosphere had been at work at the films for many weeks, it is a wonder that any pictures at all were obtained. Then came the drying of clothing, and a supply of bread. The Pioneer tried

his hand at bread baking along the lines of his rice pudding triumph, but the resulting solid cakes, scorched on the outside, dough within, could not be honestly termed the staff of life. By splitting open and toasting them they were edible, and were eaten, all but one that I saved for a paper weight.

On *Sabado* (Saturday) morning at 6.30 we broke camp and started on what our guides claimed would be the hardest day's work we had ever done, and it was. There was only one river to ford, the Marieto, and Chiquita, knowing little beast, kept her feet, while the other mules and horses were stumbling, plunging, and threatening to go down stream with the swift

current. Then began the steady climb, over a trail that was like the bed of a brook, through underbrush that tried the pack mules sorely, often stopping them completely until freed by the use of the machete. I had an army saddle on Chiquita and a rope bridle about her nose, but the first could not be cinched tight enough to stay on, and the latter was only a matter of form. Pull all I could she went where she thought the trail was best, and in all fairness I must say she was usually right. I do think, however, when she insisted on crowding so close to a sharp stub pointing down the trail that saddle and rider were



TOWN BAKERY AT LAS MINAS.



THE CHURCH AT LAS MINAS.





WILD "CASTILLOA," SHOWING STUMP OF BIG TREE FROM WHICH SPROUTS HAD GROWN.

both ripped off, instead of slipping her hind legs out of the cinch and continuing on after the rest, she might have waited. I certainly gave her to understand that I advised the other side of the trail, and in response to my vigorous pull her head came round until it almost touched my knee, but the obstinate little body went straight on.

Some of the "hog backs" climbed were of the razorback variety—just a narrow path along the spine of lofty ridges forested on both sides, incredibly steep. The gray mule got in difficulties on one, lost his balance, curled up and rolled over and over until stopped by a big tree and a tangle of monkey vine. He lay at ease until relieved of the pack, then struggled to his feet and climbed back to the path, not in the least ruffled.

It must not be supposed that the trail went up all the time; on the contrary, it was a quarter of a mile up, then an eighth of a mile down, and we rode sometimes lying flat on the beast's back, at others with feet along the sides of the mule's neck and leaning as far backward as possible. Many a rod did Chiquita slide down clayey steeps, but not a misstep did she make through it all. We lunched by a brook in a deep valley where the dense shade made twilight of high noon, then went on and the climbing was worse than ever. The first signs of rebellion on the part of the beasts of burden came from the *mula grande* who bore the Commodore. He thought it was time his rider walked a little and while the Commodore paused to reason with him the rest rode on. Very soon the way became so steep that all dismounted and walked. While catching breath at the top of a particularly stiff bit, we heard the Commodore coming, puffing, panting, profaning.

"Where is your mule?" I asked.

"Blank the blankity blank beast he won't even allow me to lead him, let alone ride!" he exclaimed. "Refuses to associate with me, blank him!"

And so it was. *Mula grande* appeared a few moments later, halted a rod away, and when approached simply stood stock still. If the Commodore swore he put his ears forward so as to miss none of it, and if he fell to belaboring him with a cudgel,

simply began to eat of the herbage with an air of unconcern that would have tempted many to shoot.

About 5 o'clock Chapo, the pig ranch where we must spend the night, was reached. We were tired out but happy, for in the memory of the oldest inhabitant never had that journey been made without encountering a heavy rain storm on the top of Montoso (over which we came) and we had come through dry. Hammocks were swung in a big, half ruined pigshed, a chicken cooked and eaten, and we turned in. The aneroid said 2950 feet for altitude. It was quite cool, but deliciously dry as compared with Rio Negro.

Up at 5 the next morning, after a hasty breakfast of Pioneer's bread and coffee, the climbing was continued. Here there was less forest and the trail was centuries old. In places it was worn down in the red porphyry until the sides rose above the rider's head, while at the bottom it was barely wide enough for the mule to walk. It was also often cut into by a series of three to five foot steps, with a pool of water in the hollow of each, so the difficulty in getting along may be imagined. Finally the top of Cerro Nuncio was reached, 3500 feet in the air, and laid out before us like a map, were the plains of the other side of the peninsular. This mountain, so said the Miner, was a mass of gold bearing quartz, and a part of the property we were examining, but we left it where it was. After a rest we started down toward the town of Las Minas, which was to be our recuperating and repairing station. The descent was far too steep to ride, so we climbed down, finally reaching the plains, and a little after noon rode into the old Indian town. Here, installed in a house owned by the Pioneer, we were soon sitting at a table, using knives, forks, and napkins as if we had always been accustomed to them.

This narrative relates primarily to rubber, and it is hard to forecast just how much extraneous matter the reader will stand. But it is only fair to the writer to allow him a word concerning a part of the world which Christopher Columbus, Duke of Veragua, chose for his own, as it was his province, Veragua, that we then were in. Not only that, but all the Indians of his time were Spanish slaves, and the amount of work that they did in digging down mountain sides for gold, is marvelous. Las Minas, founded by the descendents of Columbus, has its plaza, church, tiled houses, dogs, children, and buz-



FOURTH OF JULY FIESTA AT LAS MINAS



zards, like all Central American towns. It also has several fine *Castilloa* trees, and not far away an extensive *Castilloa* plantation. The latter is known as "Las Margaritas" and is owned by the alcalde of Las Minas. It consists of about 20 hectares of land, planted with rubber and coffee. There are said to be some 25,000 *Castilloas*, that for age would average about three years. One tree that was ten years old was 16 inches in diameter, and bled freely, but the *latex* was waxy, and did not coagulate until the wax was worked out. This was not the case with all, and I think the difference was individual.

In our conversation with the Indians we learned all that they knew of the land just explored. They confessed that they did not like to go over there as they were afraid of getting lost. They also boasted of the times when their grandfathers crossed the mountains and, filling canoes with *latex*, used them as coagulating vessels, and very hesitatingly, and only after very much persuasion, they told of the gold some brought out and of the "lost mines" that had once produced such riches for the Spaniards before the Indians rose and massacred them.

Fourth of July came while we were in Las Minas, but it would take pages to tell of the fiesta that we gave the town, and of the *baile* they gave us in return. At this baile the alcalde played the first violin, and was accompanied by a mandolin, a triangle, and a native drum. All day long the whole population were shouting *Viva Independencia Estados Unidos!* and we in turn *Viva Independencia Panama!*—while *Amigos Americanos* and *Amigos Pana*—something or other—were swapped back and forth most fraternally.

Visiting the old Spanish mine, the Golden Cock, now being developed by Americans, we learned from the natives that at times a golden cock crows, and then all the dead men killed by a cavein during the Spanish occupation, groan in concert. A golden bull that is somewhere inside of the mine also has a habit of roaring when certain calamities are due.

From Las Minas came the journey to Pesé, a town of some 500 inhabitants. Here the Pioneer also had a store and his home, where we were entertained most royally. We did not tarry long, however, as the Prospector was already suffering from painful tropical boils and it seemed necessary to get where there were physicians. From Pesé we went to Chitré on horse or mule back—all except the invalid, who rode in a bull cart—and finally arrived at Innocentias Hotel. I was about as near a wreck as one could be, for Chiquita on level ground developed into the fastest, hardest gaited little trotter that I have ever seen. She simply would not canter and in her trot kept up with the galloping horses and pounded me almost to jelly.

At Chitré we expected to find the *Almirante*, but she was not there. After waiting two days we took passage on the *Quartros Hermanos*, the Prospector being brought aboard on a mattress. It must not be thought he was the only damaged one, for all of us were somewhat battered. I had a scalp wound an inch long that I had secured by going through a doorway at Innocentias without stooping enough to avoid the sharp tiles, the Scout had a cracked rib, because his horse jammed him under a leaning tree, and the Commodore had a touch of fever.

The *Quartros Hermanos* got away late, by poling down the

narrow muddy Parita river  $1\frac{1}{2}$  miles to the bay. At the river's mouth we met the *Almirante*, and, leaving the Commodore to guard the luggage, boarded our own boat. It was hard work to get *El Capitan* to turn about and follow the other schooner—why, I don't know—but it was finally accomplished. But alas, hardly were the schooners a quarter of a mile from shore when both were aground. Half an hour later one could walk on the hard black sand from one boat to the other. It would be flood tide by midnight and if there was wind that would mean a race for Panama. So I offered our captain \$10, silver, if he got in first. By 11 our boat was again on even keel; ten minutes later was under way, the breeze freshening every minute. It finally got so fresh that I could not sleep on deck but went below. With the exception of one hour's calm the wind held all the next day and at midnight blew us into Panama harbor. But the shrewd old Portuguese captain of the *Quartros Hermanos* beat us an hour by getting to the windward and then sailing like a streak.

It was just sunrise as we dropped anchor in the bay just opposite the Hotel Marina, from which picturesque hostelry many boats put off to secure the job of putting us and our be-

longings ashore. This task was accomplished after much haggling, and within an hour we stood on the beach surrounded by our luggage, an object of much interest to a score of watermen, half as many dogs, and a huge drove of half wild pigs that had just been unloaded from a small freight schooner. One more hour on the beach suffered to purchase porters and a cart—I say "purchase" advisedly—and start our belongings toward the hotel.

Once again at the Hotel Grand Central, where were stored most of our clothes, we prepared to assume the habiliments of civilization. The first thing was to induce the hotel management to open the bathroom and furnish water. After a forenoon of persuasion that was finally accomplished, and we felt better, even if the hotel employés did not. Then followed a visit to the cable office, a second exploration of the city, and preparations for passage to New York, on the good ship *Yuca-tan*, which was to sail, and did sail, on the



INDIAN PACK BEARER.

day following.

In our journeys about the city and along the line of the canal I tried as far as possible to get close to the people—that is, in the way of mental, not physical contact. Of the native Panamanians I found some exceedingly well educated and active, sane, business men. They were, almost without exception, most pronounced in favor of the annexation of the young republic by the United States. The mass of the people, however, apparently wish only to be let alone, and resent the bustling ways of the Americans. I should say also that there was an exaggerated idea, in their minds, concerning the prowess of the Americans, particularly the trim looking marines who walked the streets as if each individual could put an army to flight.

That the canal would be put through and in less time than is generally believed all of the business men were agreed, and that both Colon and Panama city would one day, under the American engineers, be free from yellow fever and as habitable and safe as Singapore or Havana none doubted, but that either city would be of great commercial importance once the canal was finished was not predicted.

## RUBBER PLANTING AND EXPLOITATION.

## CEYLON RUBBER AT THE ST. LOUIS WORLD'S FAIR.

ACCORDING to reports from Ceylon, gold medals were awarded for exhibits of Ceylon products (including cultivated rubber) to H. V. Bagot, who is mentioned elsewhere in these columns; to R. W. Harrison, and to the Heatherly and Hindugala estates, and a silver medal to the Gikiyanakande estate. Certain other awards were made, but the estates here named are mentioned particularly on account of having been referred to in Mr. Pearson's recent correspondence on rubber planting in the Far East.

## LETTER FROM A CEYLON PLANTER.

MR. H. V. BAGOT, manager of the Aropolakanda estate of the Eastern Produce and Estates Co., Limited, at Tebuwana, Ceylon, writes to THE INDIA RUBBER WORLD (November 13): "I am having a very good year here, and shall get very nearly 2 pounds of dry rubber per tree, and am averaging 5 shillings net; so shall show a clear profit of £80 sterling [=about \$390] per acre. Not so bad in these hard times." This is the second year of production. Last year, as stated in this Journal [July 1, 1904—page 344] Mr. Bagot reported proceeds averaging about \$280 per acre, on a yield of a little less than 1½ pounds of rubber per tree.—Mr. Bagot also writes: "May I make a correction as to rubber 'stumps.' [See THE INDIA RUBBER WORLD, October 1, 1904—page 12.] These are not 'tapped' seedlings, but plants grown from seed in our nurseries, of about one year or more old and of a finger thickness. We 'stump' *i. e.*, cut these down to about 20 inches, more or less, according to fancy, when we plant them out on our clearings. I never heard of seedlings being 'tapped.'" [This is really what we meant to convey in our former paragraph, but a mistake was made in using the word "tap" to indicate the cutting back of the seedlings.—THE EDITOR.]

## "RECORD PRICES" FOR CEYLON RUBBER.

REFERRING to the sale of Ceylon plantation rubber at the London auctions on November 11 [See THE INDIA RUBBER WORLD, December 1, page 101], *The Times of Ceylon* mentions the sources of the two lots bringing the highest prices. A parcel of 239 pounds from Aberdeen estate, Lower Dikoya, realized 5s. 9½d [= \$1.40½] per pound. This estate, 95 miles by rail from Colombo, embraces 478 acres, of which 359 are planted in tea. The proprietors are the Alliance Tea Co. of Ceylon, Limited, and the resident manager Mr. J. M. Mitchell. There are now on the estate about 1300 rubber trees of sufficient age for tapping, but 35,000 new trees have been planted during the year. A lot of five cases, for which 5s. 9d. was realized, was the product of Langsland estate, in Kalutara district, owned by the heirs of H. Booth, and managed by Mr. A. P. Booth. There are two estates under this control, on which 249 acres are planted in tea, with rubber interplanted, and 87 acres in rubber alone. *The Times of Ceylon* says "the rubber was taken from trees 7 to 8 years old, and was thus well matured rubber in every respect." Space is given here to these details as pointing to the possibility of rubber manufacturers being able in time to supply their requirements in rubber direct from known estates proprietors, as directly as consumers of rubber goods may now deal with the manufacturer.—*The Times of Ceylon* (November 23), mentioning the purchase in London of 6 tons of Ceylon rubber from several Kalatura and Kelani Valley estates at 6 shillings [= \$1.45] per pound, says:

"No doubt the extra pence per pound were secured for the large lot offered, as buyers naturally prefer a good quantity to good lots." Still later came the London auction of November 25, at which 6s. 1d. [=nearly \$1.48] was paid, for rubber from Maddagedera, Halwatura, and Delwita estates.

## AN AGRICULTURAL SCIENTIST IN THE FAR EAST.

MR. J. B. CARRUTHERS has resigned the post of government mycologist and assistant director of the royal botanical gardens at Peradeniya, Ceylon, to accept the newly created position of director of agriculture and government botanist in the Federated Malay States. The planters in the latter section are to be congratulated, in view of the high order of ability which Mr. Carruthers has developed during his service in Ceylon, which dates back to 1890. He enters upon his new duties in enthusiastic belief in the possibility of the Malay States becoming as prosperous agriculturally as they are now from a mining point of view. They may even become the premier rubber producing colony, and to this end Mr. Carruthers undoubtedly will exert himself to the utmost. Readers of THE INDIA RUBBER WORLD have learned of his interest in rubber culture in Ceylon, particularly with regard to the treatment of the canker fungus in rubber. As regards Mr. Carruthers's professional career, it appears that since leaving the university he has been successively demonstrator of botany at the Royal Veterinary College, London; assistant consulting botanist to the Royal Agricultural Society of England; professor of botany at the College of Agriculture, Downton, Hampshire; and, lastly, in connection with the Ceylon botanical gardens, as above noted.—Mr. Carruthers delivered to the planters' association of the Matale district, Ceylon, on November 19, a lecture on canker in cacao, which was in the nature of a farewell address to the planters of the colony.

## RUBBER SEED SHIPMENTS FROM CEYLON.

THE success of rubber culture in Ceylon has led to a large demand for Pará (*Hevea*) rubber seed for export from that island. *The Times of Ceylon* mentions the shipment during August of 148,000 seeds (in cases of 2000 each), the larger part going to Singapore—presumably for planting in the Malay States. There were shipments also to Calcutta, Rangoon, Sumatra, and South Africa. Shipments continued at a good rate during September, the "Culloden" and "Kepitigalla" estates being mentioned as affording an important share of the supply. In the *Times* of September 9 Mr. F. J. Holloway, manager of the latter estate, writes: "I have two single orders of 600,000 seed each to execute, both going abroad." Some of the seed exported, however, is supplied by the botanical department, which leads the *Times* to suggest that seeds grown at the public expense might properly be kept at home, to be of benefit to the island. It advises a system of free distribution of seeds to villagers, to be planted near their homes, and while the result in each case might be insignificant, in the aggregate it might ultimately prove important.

## TO CHECK THE OUTPUT OF "CAMETA" RUBBER.

THE idea was advanced in a recent report by Mr. Consul Aymé, at Pará, that "Cametá" rubber was a special grade, rather than the product of a particular locality. [See THE INDIA RUBBER WORLD, August 1, 1904—page 379.] This view apparently is entertained by the Pará government, since a recent letter received from there refers to a proposed higher tax



on Cametá coarse rubber, beginning with the new year, than is levied on fine rubber, with a view to checking the production of the Cametá grade, when the same *latex* can be used for the production of "fine."

#### A LONDON OPINION ON CEYLON RUBBER.

IN their annual review of the India-rubber market for 1904, the London firm of S. Figgis & Co., India-rubber and colonial brokers, have this to say: "Plantation rubber grown in Ceylon and Malay States has increased considerably, and we are glad that our recommendations for several years past as to the larger planting of this have been followed so widely. The quality of the fine biscuits and sheets grown from Pará seed has continued to be very good. Prices show an advance of 1s. 6d. for fine. This 'plantation rubber' is much liked for special work and for solution. We obtained the highest price of the year, viz., 6s. 1d. in December. Everything offered has found ready buyers, and there is room for thousands of tons from Ceylon and the Straits if the quality is maintained; the scrap and ball have also been liked and sold well—up to 4s. 9d. per pound. Rambong [from *Ficus elastica*] has realized good prices. We hear of plantations of rubber in Mexico, Guatemala, and Central America, Peru, etc., also in India, Burma, and Borneo, and hope they will be from 'Para seed,' and produce fine hard clean rubber, for which there is a regular demand."

#### NEW RUBBER PLANTING COMPANIES.

CEYLON Cocoa and Rubber Co., Limited, registered in London November 9, 1904; capital, £15,000, in £1 shares. No initial public issue. Registered office: 159, Cannon street, E. C., London.

=The Lanka Rubber Co., Limited, has been registered at Colombo to acquire about 344 acres of land in the Kalutara district, near Ambatewne, Ceylon, and form a rubber plantation. The nominal capital is 100,000 rupees [= \$32,400], divided into 1000 shares.

#### EXPERIMENTS WITH RUBBER IN PORTO RICO.

THE annual report for 1904 of the secretary of agriculture of the United States says, in relation to the Porto Rico experiment station: "The tea, rubber, and cacao plantations mentioned in my last report are flourishing and are being extended." A recent letter to THE INDIA RUBBER WORLD from Mayaguez, where the experimental station is located, says: "Our plantation [rubber] consists of *Castilloas* mainly, with a few *Funtumias* and *Heveas*, as well as some *Ficus*, and we hope to start an experiment with *Manihot Glaziovii* on the dryer portion of the island soon."

#### RUBBER PLANTATION COMPANY PUBLICATIONS.

MEXICAN Mutual Planters' Co., Chicago.= [Record of work to date, and estimate of future results; illustrated.] 28 pages. Also: Bondholders' Meeting (at Chicago), September 17, 1904, addressed by J. C. Harvey, plantation manager. 16 pages. Also: *The La Junta Planter*, August, 1904. 24 pages.

Orizaba Rubber Plantation Co., Chicago = *Chiapas News*, October, 1904. 12 pages.

Isthmus Plantation Association of Mexico, Milwaukee, Wisconsin, Inspector's Report, 1904 [by Wilmer Sieg] 43 pages

Tobasco Plantation Co., Minneapolis, Minnesota.= (a) Wealth of the Isthmus. [Relates to the plans and prospects of the company.] 64 pages; maps. (b) Facts and Conclusions. [Second Annual Inspector's Report on the property and business of the company in Mexico.] 32 pages.

Costa Rica Rubber Co., Los Angeles, California.= Report of John A. Morton on the Properties of the Company [in Costa Rica]. 4 pages.

Yaveo Plantation Co., St. Joseph, Missouri.= Bulletin No. 6, December 6, 1904. 4 pages.

## RUBBER EXPLOITATION IN PERU.

THE British consul general in Peru, Mr. St. John, in his latest annual report [August 9, 1904] says: "For the purpose of developing the India-rubber districts, the Peruvian government have greatly encouraged the construction of bridge roads and trails. In his message to congress, on the opening of the last session, the president of the republic claimed that the total length of the bridge roads and of a cartroad which were either under construction or contracted for was 1300 miles. The work is to be paid for by grants of land."

Mr. St. John's report is accompanied by a report of the vice consul at Arequipa, from which we quote as follows:

"The attention of capitalists has also of late years been directed to the districts of Carabaya and Sandia, where gold in paying quantities has been found in the river beds. Also to the regions of the upper Inambari and Madre de Dios, which are very rich in tropical produce, of which India-rubber is the most important. The Inca Mining Co., owners of the famous 'Santo Domingo' mine in Carabaya, have secured from the Peruvian government a grant of 2,000,000 acres of ground on the Madre de Dios, on condition that they construct a good cartroad from that district to Tirapata, a station on the Southern railway, 357 miles from Mollendo [on the Pacific coast]. This cartroad is now approaching completion and will have a total length of about 200 miles; it will serve to open out immense tracts of ground abounding in rubber trees of the most valuable kind.

"Hitherto nearly all the rubber produced in that district has been exported by way of Pará, often taking from 6 to 8 months in reaching that place. It is now possible to send produce from the Inambari and Madre de Dios to Tirapata in 10 to 12 days, and thence to Mollendo in three days. It would naturally be supposed that the best outlet for the produce of the Inambari and Madre de Dios regions would be by way of those rivers to their confluence with the Amazon, and thence to Pará; owing, however, to intervening rapids extending in some parts for hundreds of miles, and the difficulty of portage, that route has been found to be most difficult and expensive. The best outlet is therefore over the Cordilleras by way of Tirapata and Mollendo."

The headquarters of the Inca Mining Co. are at Bradford, Pennsylvania, at which place the annual meeting was held on December 21, together with the annual meeting of the Inca Rubber Co., an offshoot of the mining company, formed in 1903, with a capitalization of \$1,000,000. The trail above referred to was reported to be almost finished. It is graded, and equipped with a telephone line. The Inca Rubber Co. have decided to purchase a steel steamboat for navigating the rivers in the neighborhood of their concession. The officers of the Inca Rubber Co. are: C. P. Collins, president; Chester W. Brown, manager; Joseph Seep, J. T. Jones, J. B. Leonard, L. E. Hamsher, W. R. Weaver, and W. W. Fell, directors.

Another rubber exploiting company organized for working in practically the same region is the Carabaya Rubber and Navigation Co., with headquarters in New York, and reported on in THE INDIA RUBBER WORLD October 1, 1904 (page 11).

## DETERIORATION (?) OF PARA RUBBER.

THE Rio *Brazilian Review* of December 13 said: The question of deterioration of rubber and its remedy is being discussed at Pará, where a district tax of 1 milreis per kilo [= 11 or 12 cents per pound] is proposed to be levied on "sernamby Cametá." Sernamby Cametá is an inferior kind of

rubber, the result of careless and hasty methods of tapping the trees. A man who can tap 120 trees per day to yield "fine" rubber will tap as many as 250 for sernamby Cametá. Consequently the latter is more popular, but spoils and quickly exhausts the trees. In some districts, like Cametá, this has gone so far that only sernamby Cametá can be obtained, and they are hopeless, but there are others, especially in the islands, where prompt measures might yet save a large number of trees. In the state of Amazonas no "sernamby Cametá" is produced, but any rubber showing defective smoking or preparation is classed as sernamby. For the season 1903-04, exports of rubber from Pará [produced within the state] amounted to 11,586 tons, of which 5460, or nearly 50 per cent., were sernamby. At Manáos, out of the total of 10,907 tons exported, only 2009 tons, or less than 20 per cent., were sernamby.

#### A FAILURE IN RUBBER EXPLOITATION.

AT the third annual general meeting of the Brazilian Rubber Trust, Limited (London, December 12, 1904), the reports presented showed a profit for the year ending September 30, after paying the debenture interest, of £100, reducing the debit balance in the last balance sheet to £5232. This, the chairman pointed out, showed that the company was turning the corner; in other words, they had ceased to lose money.

The smallness of this profit is particularly interesting when it is recalled that this company represents what is left of the Rubber Estates of Para, Limited, formed in 1898, with a capital of £350,000, to work estates with an area of over 284 square miles, situated on the island of Marajó and acquired from the Visconde de São Domingos, who had been working them for many years. The number of full grown trees was estimated at 1,300,000, and during the three years before being taken over by the English company the estates were declared to have produced an average of 250 tons of rubber yearly, of the gross value in Europe or New York of £90,000. The new company, however, attained no such results. During the first year they reported 8¾ tons of rubber, while in the second year 58 tons were collected, to secure which £23,000 were expended for the single item of outfitting the rubber workers sent upon the estates. Finally, the working capital of the company having become exhausted, instead of dividends being realized, the company was reorganized September 28, 1901, as the Brazilian Rubber Trust, Limited, with £37,500 capital.

In spite of every possible economy, money continued to be lost, and two years ago it was decided not to remit any more funds to Brazil, but to lease the estates to a Brazilian firm with a direct interest in economy. The highest rent obtainable was 50,000 milreis per year [=about \$12,500, with exchange at 12d.] with an arrangement that if rubber rose above the price then ruling at Pará [6s. 6d. per kilogram = 71¼ cents per pound], the company were to have a small percentage. The best showing that the company has thus far been able to make is that it has ceased to lose money, and the directors hope that upon the expiration of the lease some two years hence, they will be able to secure a larger yearly rental.

The history of this enterprise has been reported very fully in THE INDIA RUBBER WORLD. In the issue of October 1, 1902 (page 5), Mr. Ashmore Russan, a director in the company both in its old and its new form, pointed out at length the disadvantages under which estates in the Amazon valley were worked under foreign management. In that issue he declared his belief that the São Domingos estates had actually produced the amount of rubber claimed, and that the reported number of trees actually existed. And at the late meeting in London, the

chairman stated that they had reached the conclusion that European management was a delusion, and that the only hope is in forming connections with responsible Brazilian parties.

Space is given to these details, not for the purpose of discouraging any branch of rubber exploitation, but for the reason that they illustrate forcibly the difficulties of securing rubber from natural sources, which tend to keep up the high cost of the product to consumers. The result of the English control of the estates referred to evidently is that the rubber workers formerly employed there have transferred their activity to new fields, where their employment by native firms no doubt has yielded good profits, in view of the prevailing high prices of rubber.

#### AFRICAN RUBBER TRADING PROFITS.

THE report of the Société anonyme Belge pour le Commerce du Haut-Congo—the second oldest of the Belgian companies trading on the Congo—for the business year 1903 showed net profits of 737,140.43 francs [= \$142,268.10], the total capital being 5,050,000 francs [= \$974,650], which works out at nearly 15 per cent. earned on the capital. In former years, however, the earnings have been much larger, amounting in 1899, for example, to 2,273,821 francs [= \$438,847.45], or approximately 45 per cent. on the capital. The company's preference shares have been quoted at about the same figures for years, but the ordinary shares have declined sharply from the highest figures reported in this Journal, as follows:

	Preferred.	Ordinary.
January, 1901.....	francs per share 527.50	2060
December, 1904.....	527	1237

The last business report refers to a decline in the company's production of Caoutchouc, which reached only 74 tons in 1903. [While statements by the company are not now available, it may be said that THE INDIA RUBBER WORLD reported the arrival at Antwerp during 1901 of 330 tons of rubber for account of the Société Belge du Haut-Congo.] The report states: "This falling off has been caused notably by the position taken by the natives along the banks of the Lomela. Every effort has been made to increase this output, and at present the company possesses in the Bussira district 17 trading posts."

The net profits of the company were due less to its direct operations than to participation in the profits of the Cie. du Lomani and the Cie. du Kasai. In the latter it holds 340 shares, which yielded during the year 750 francs per share, or 255,000 francs [= \$45,215]. The Kasai syndicate is capitalized in 2010 shares, without designation of value. At 750 francs per share, the total net earnings of the Kasai for the year would be 1,507,500 francs [= \$290,947.50].

#### STILL LOSING, BUT HOPEFUL, COMPANY.

THE report of the fourth business year of the Gesellschaft Nordwest-Kamerun (Berlin) reveals a lack of profits, in spite of the increased receipts of rubber, palm kernels, and ebony, which result is set down to the expenses incurred in suppressing an uprising of the natives in the Anyang district, in Kamerun. The rubber plantation at Abonando suffered from want of attention by reason of the revolt. The company have complied already with their obligation to expend, within 10 years, 3,000,000 marks in the development of their concessions. The exportation of rubber during the year amounted to 43,829 kilograms, worth 145,000 marks. The loss account amounted, at the end of the fourth year, to 625,834 marks, but the company possessed valuable assets, they had established 27 trading stations, and 1,440,000 of the 4,000,000 marks capital remained to be called up; the management, therefore, still had hopes for the future.



## THE CONGO RUBBER SITUATION.

IN their annual review of the Antwerp rubber market for 1904—the statistical details of which appear on the market pages of this Journal—Messrs. Grisar & Co., brokers, say:

"There continues to be in our market a regular development in the importation of Caoutchouc. Purchasers are more and more appreciative of the facilities which this market at present offers them, on account of its being regularly supplied not only with the Congo varieties, but also with kinds coming from other sources of supply. Thus the establishment and operation of a regular line between Manáos and Antwerp has already had a favorable influence on the importation of Pará rubbers to our market. There have been this year imported about 800 tons, which have gone directly into use. The Congo varieties, however, are the ones which afford the principal supply to the demands on our market.

"The total amount of importations from the basin of the Congo have shown little fluctuations of importance for a period of several years. This lack of change arises from the preservative measures, enacted by the government of the Congo Free State, for the purpose of preventing the spoilation of the forest domains, whose destruction would not have been slow by excessive exploitation. The preservative measures enacted by the government for the purpose of regrowing the caoutchouc forests, have been revised and finished by an enactment dated September 27, 1904.

"The provisions of which we spoke in our last annual review have all been put in force regarding what concerns the official make-up of the forest superintendence service, as well as the duties relegated to the agents of this service, and also in regard to the maximum production of Caoutchouc, which the districts of the state cannot overrun. The terms of the new enactment have for their purpose the increase of productive ground, in addition to the obligations already enforced, concerning the forest domains. By this means, at the present time, it becomes necessary to start a plantation comprising at least 150 rubber plants or vines for each ton of *Caoutchouc d'herbes* (root rubber) gathered; previously the gathering of this rubber was not subject to any exactions whatever. As to the production of caoutchouc derived from trees or from vines, it is obligatory to set out 500 Caoutchouc plants for each ton of product gathered.

"Regarding the method of gathering, the new enactment is restricted only to declaring that Caoutchouc from trees or from vines can be gathered only from incisions; it also exacts that the cutting of the trees or vines, in gathering rubber, shall be stopped. Likewise, the extraction of the Caoutchouc, by taking off the bark of the trees or the extraction from the vines by pounding or grinding the bark or the vines, or by any other means whatsoever, except by incisions. It is mandatory that public action should be taken on all infractions of the law, during a term of three years. These new measures are fully justified on account of the necessary care which these newly started plantations must have, without which they would have no future value.

"The rubber plantations already started in conformity with legal provisions, amount at the present time altogether to about 10,000,000 cultivated trees or vines, of which the Congo Free State is responsible for one half, and the other half being divided between various companies and individuals established on the Congo. The number of plants required for 1904 may be estimated at about 3,350,000; it will be essentially the same for 1905, the quantities of this product gathered and exported not having essentially increased during the past period.

"Referring to the quality of the African products, they have constantly become better as a result of the care taken in supervision, and instructing the blacks at the present time. The gums which are most appreciated are those coming from the Kasai district and from the Equateur; they have also this year attained the highest market prices known, that is, 11.50 and 11.75 francs.

"On the other hand, we have received some lots from a new district just opened up, coming from several new *lianes*, which are imperfectly known, in which the coagulation leaves much to be desired, giving products which are much inferior on account of their pitchy quality. Competent chemists are giving their attention, at the present time, to a thorough study regarding the nature of this vegetation, and to the proper means for coagulating the milk in a rational manner. With little doubt, satisfactory results will be soon obtained.

"Important progress has been obtained in the process of packing for shipment, the gum now previously undergoing a thorough desiccation in Africa, so as to better resist the crushing of the packages and which now arrives here in a better condition.

"As the world's production of Caoutchouc is evidently insufficient to supply industrial requirements, we have again this year been parties to a quick acceptance of merchandise offered to sale. From the commencement of the year, the market rapidly went up 15 per cent. until March was reached, afterward in June to July, there was a temporary calm, the rise re-occurring, so to speak, without interruption until the end of December, and we close the year at an average market of about 12 per cent. above that of 1903."

Arrivals at Antwerp in 1904 were 5764 tons, against 5726 tons in 1903. The arrivals from the Congo Free State, however, were only 4724 tons, against 5180 in 1903.

## RUBBER REGULATIONS ON THE CONGO.

A NEW requirement by the Congo Free State, that hereafter rubber must be obtained in that state only by tapping (incisions), whether from trees or *lianes*, was noted in the last issue of this Journal (page 136). In relation to this matter *La Chronique Coloniale* (Brussels, December 25) states as follows:

"THE KASAI COMPANY.

"We have received the surprising report that the Free State is to act with extreme severity and precipitation in carrying out the decree of September 22 last, prohibiting the pounding of the rubber *lianes*, especially in regard to the Compagnie du Kasai. It is well known that the pounding process is exclusively used in the low lands of the Kasai and of the Sankuru. A prohibitive measure, however well founded it may be, should evidently be only gradually enforced. The immediate enforcement of the decree would obviously create a hostile feeling among the natives, which would result in a considerable decrease in the production.

"This will especially be the case in the factories of Luebo, Demba, Tombolo, Ikongo, Ikoka, Batempa and Pania-Mutombo, which produce only the so-called *Pilé*, or pounded, rubber, and have a monthly output of 30 tons. While recognizing the foresight shown by the State in the safe guarding of the forest reservations in our future colony, there may be reason to regret that precipitation in the carrying out of the legal measures taken for that purpose must necessarily cause a reduction of one-third in the output of the Kasai company."—[The total arrivals of rubber at Antwerp on account of the Kasai company during 1904 were 1003 tons, or more than one-fifth of the total arrivals.—THE EDITOR.]

## THE INDIA-RUBBER TRADE IN GREAT BRITAIN.

*By Our Regular Correspondent.*

ANY review of the past year would be incomplete without a reference to the dominant feature of the record prices ruling for raw rubber. Such brief concession to law and order is, however, all that will be said on the topic, in order to avoid repetition. With regard to the manufacturing side there is a dearth of subjects which call for comment. No new works have been started during the year, and certainly none were needed. Despite the adverse conditions which have prevailed there have been no failures—that is, of actual manufacturers. It is clear, however, from perusal of the balance sheets issued by those firms which are public limited companies, that the year has not been a particularly prosperous one; of course with regard to private firms one can only in the absence of special information, speculate as to the results obtained, but it is a fair assumption that those firms whose figures have not become public property have had much the same experience as the others. As regards novelties in the trade, there is practically only one article which calls for mention by reason of the amount of rubber necessitated in its manufacture. I refer of course to the heel pad, which the past year has seen made in such largely increased quantities. With respect to the tire trade, the London cycle show this season revealed an utter lack of novelties. It would seem that as far as the rubber of motor tires is concerned, finality has been pretty well attained; it is in the direction of a really rot-proof canvas that improvement is urgently wanted. The waterproof business, as far as rubber is concerned, has not at all shown that resuscitation which was predicted of it, and there is little evidence of an improvement being imminent. Perhaps the event of the year has been the lapse of the Dunlop monopoly, but this matter has been referred to exhaustively elsewhere in this Journal. Despite the continuance of experimenting, I understand that none of our manufacturers have yet solved the problem of making a rubber sponge which will compete with the Russian article, and now that prices have come down the incentive to continue experimenting is not so great as it was. This sponge business is a good instance of the difficulty which rubber manufacturers experience in imitating their rivals; another striking example is the position which has been held for so many years by Messrs. William Warne & Co., Limited (London), in red rubber, despite the efforts of their competitors to get on equal terms.

THE *Financial Times* (London), in a reference to the rubber market of 1904, says that a feature was the rise in price of fine rubber out of all proportion to the prices ruling for other sorts. It is also stated that the rise of 1s. 2d. per pound in the year is due to combined increased demand and speculation. It is not hinted who the speculators are, but presumably they are the Liverpool rubber brokers, or the merchants at Pará. So many dark things have been said within this country and on the Continent as to the part played by the Liverpool men in the situation which has arisen, that one may well wish for some authoritative statement on the point. This, however, we are hardly likely to get. It has been urged elsewhere in THE INDIA RUBBER WORLD that the high prices were merely the outcome of the law of demand and supply, and could not fairly be attributed to any cornering of rubber by this or that Liverpool house, and certainly in the absence of reliable data to the contrary this view

seems the most sensible one to take. With regard to the statement that the prices of lower grades of rubber have not moved in conformity with those for Pará, the matter is referred to here as suggesting a subject for study by any reader of a statistical turn of mind. In a recent correspondence I expressed some doubt as to what would be the attitude of the American firms in London with regard to the 10 per cent. rise of the India Rubber Manufacturers' Association. The circular which was sent out stated that, *inter alia*, rubber boots and shoes would come under a special arrangement. What this arrangement is or whether the American and British producers are working in harmony, or not, I do not know, but I find that the Americans have raised their prices in London. For instance in the case of ladies' goloshes, which are being increasingly sold in London, I am informed that the same article which was sold at 2s. 11d. in December, 1903, cost 3s. 6d. in December, 1904. It is the golosh with raised sides, which gets a good grip of the boot, which is so much in favor; it is considered a great improvement on the older type, which was frequently left sticking in the mud.

THE illustrated article on this subject in THE INDIA RUBBER WORLD for November last was interesting as adumbrating quite a new departure. I do not gather from the text whether the employment of electrical heat for vulcanizing is an accomplished fact or whether its feasibility has been merely demonstrated. Nothing is said as to the cost of generating the current—perhaps because this is so variable. It is stated, however, that the actual cost of operation is about one half of that of steam. This statement must of course be duly qualified, according as to whether fuel is cheap or dear. The cost of electricity for lighting purposes varies a good deal in British towns, and so far the application of the current for heating purposes in cooking ranges and fires has made any progress only where the cost is comparatively low. Certainly electrical energy is in use at some of our rubber works, though its employment is not spreading with rapidity. If the new process attracts serious attention probably those who are now using electricity as a motive power will give it their attention. The process would seem to deserve attention in Scandinavia, for instance at the Gislaved rubber works, in Sweden, where electrical energy derived from the falls in the river is utilized and where coal is expensive.

THE rule excluding politics from the columns of this Journal must, on the whole, be commended. All the same, however, when, as at present in Great Britain, there is before the electorate a topic which is entirely concerned with manufactures, it certainly seems appropriate enough for those engaged in particular trades to join in the voluminous utterances of politicians who come to public meetings to discuss trades, the details of which they are only acquainted with by the medium of information kindly supplied. Where matters of the sort are made a strictly party question points which are somewhat damaging to the policy advocated are apt to be ignored and we are treated at any rate to a *suppressio veri*, if not to a *suggestio falsi*. It seems to me that reputable trade organs, always supposing that such are free from political bias, might enter into the fray with advantage to those who seek for light but only obtain a feeble

A  
RETROSPECT.ELECTRIC  
VULCANIZING.THE  
FISCAL  
QUESTION.THE PRICE  
OF RUBBER.



glimmer from the torches borne by political partisans. It is not my intention to enter into the fray myself, but I may note how divergent are the views held by prominent men in the rubber industry—not only between firm and firm, but in more than one case we find a house divided against itself. The difference of opinion, I may say, concerns itself with the momentous question of a reversal to a protectionist policy generally; with regard to the free entry of manufactured rubber goods into the country the trade seems to be practically unanimous that it constitutes a real grievance, and one that calls for remedial measures. With regard to America a subscriber to THE INDIA RUBBER WORLD who has recently returned from a business tour in the States has expressed to me strongly his conviction that it would be a fatal step for us to remodel our system on American lines. No doubt other British subscribers would try to convince me to the contrary if they thought it worth while.

AFTER reading the newspaper accounts of the New York blizzard it seems somewhat trivial to refer to the more sedate

WEATHER  
TROUBLES.

methods of our winter. Still we have had some hard frosts with the usual accompaniment of burst water pipes and domestic invectives. I overheard a conversation between two sufferers, where the question was put as to why the lead pipes were not lined with India-rubber. I don't know whether anything of the sort has been tried or not but it might be worth consideration. Of course the metal would pursue its usual course but the attendant disadvantages would be obviated. If some procedure of the sort were adopted it would probably be found that Gutta-percha would have advantages over rubber.

A MANUFACTURER of this commodity assures me emphatically that his sales to rubber works have shown no diminution whatever in recent years, though he admitted that the price had fallen considerably. As the manufacturer in question has contracts of considerable magnitude this information is somewhat surprising and quite at variance with the mournful tone adopted generally by manufacturers of the moribund macintosh. As I have no good reason to dub my informant a prevaricator I must take it as an alternative presumption that naphtha is being increasingly used for other than macintosh making purposes. Exactly what these purposes are I am ignorant, and I must say I find it difficult to believe that there are in existence any processes or combination of processes which can call for the use of naphtha to an amount anything like what was used in the macintosh industry, five or six years ago.

SOLVENT  
NAPHTHA.

I AM glad to hear that this concern, which has experienced some rather troublous times, has now undergone reconstruction.

THE ECCLES  
RUBBER CO.

I am precluded at the moment from enlarging on detail but may say that the prospects for the future under the satisfactory capitalization now being effected seem bright enough. The capital of the New Eccles Rubber Works, Limited, is £25,000.

THE recent flotation of this limited company to take over a private firm of the same name has been chronicled in some journals as an event of importance in the rubber manufacturing world. It may be mentioned, however, that this firm is one—and there are several of them—who do not manufacture card clothing throughout. They buy the cotton and the rubber sheet and then proceed to put in the steel points. In the sale of the finished article they come into competition with the members of the Card Clothing Manufacturers' Association. From what a member of this association told me it appears that the card trade is the worst paying one in existence, owing to the inability to obtain an advance when the price of rubber was prohibi-

tive. The men who bought the rubber ready for use could not be said to effectively compete with those who manufactured the article throughout.

THIS business, judging by what one hears in the trade, seems to be getting overdone. The number of those engaged in recovering or in collecting old rubber has multiplied largely of recent years, with the result that rubber manufacturers are being called upon

RECOVERED  
RUBBER.

by vendors to an extent which somewhat tries their patience. The collector of old rubber does not find his business half as easy as it used to be, as those who have old rubber goods are now so wide awake with regard to their market value. The dealer also finds when he goes to sell his goods, be they merely scrap rubber or recovered rubber, that he has competitors in the rubber manufacturers themselves. Not competitors in a general sense, perhaps, but several firms have perfected recovery methods of their own and work up their own waste, both that produced in the factory and that which they buy back from their customers who now look upon this procedure as due to them for their custom. The two concerns of importance in this branch established in the last year or two—the North-Western Rubber Co. (Litherland, Liverpool), and the Dialene Co. (Preston) have made headway with their product, though the prices asked do not altogether meet with the approval of the frugally minded manufacturer. One may mention also the new works at Copenhagen—those of the Dansk Afvulkaniserings Aktieselskab—which appear from all reports to be doing such good business, turning out stuff at 2 shillings per pound. It would be interesting to know if this is derived from vulcanized waste?

—The statistical tables referring to the American exports of reclaimed rubber to different countries given on page 130 of the January issue of THE INDIA RUBBER WORLD are interesting, more particularly from the great variations shown by the same countries in succeeding years. For instance in 1901-02—using round figures—we find \$320,000 value for Great Britain, while in the following year it was \$129,000; last year it was \$380,000. Even more striking are the figures for Norway and Sweden: \$18,000 in 1901-02; \$15,000 in the next year, while for last year the value was only \$8000. If these figures are reliable it would be interesting to have them elaborated. —[The exports of American reclaimed rubber to the different countries is not necessarily a measure of the consumption of the American product in those countries, for the reason that consumption at a given point may sometimes be supplied indirectly from another European port, and not from New York.—THE EDITOR.]

IN a recent legal case relating to a serious shock received by a man repairing electric wires a good deal was said about rubber gloves and it was laid down that an employer is not guilty of contributory negligence if he fail to provide his men with these gloves. One would have thought that such a precautionary measure would have been obligatory, but apparently it is not. Some of the newspapers in commenting on the case advise the extended use of gloves, and seeing that several firms are now supplying gloves specially intended for the purpose and against which nothing can be urged on the score of comfort and durability, it is to be hoped that some sort of an agitation will result from this case with the effect of largely increasing their sale.

RUBBER  
GLOVES.

THE new American lists [says *The Canadian Shoe and Leather Journal*] are practically identical, a few items on the American list being higher than the Canadian, while on the other hand a number of lines are lower on the Canadian list. The difference, however, is slight.

## SOME RUBBER INTERESTS IN EUROPE.

## COMBINATION OF GALALITH INTERESTS.

AT a special meeting of shareholders of the Vereinigte Gummiwaaren-Fabriken Harburg-Wien, at Harburg a/d Elbe, on December 17, it was proposed by the directors that the company participate in a new company to be formed for the manufacture of Galalith. The Harburg-Vienna company have been interested for some time in the exploitation of Galalith, in competition with hard rubber, celluloid, and horn, and the directors reported a steady growth in the demand for the material. Addressing the meeting, the managing director, Herr Louis Hoff, stated that, after their experimental work in connection with the Galalith manufacture had been concluded in July last, it was found that the prices demanded in Germany for the necessary raw material were too high for the company to pay. They had been buying the raw material, therefore, in Paris, from the Compagnie Française de la Galalith. The French Galalith works, however, had not shown a profit, and the question arose whether it would be possible for them to be acquired by the Harburg company at a low price, with a view to the creation of an international Galalith company. One incentive to such action was found in the fact that the proposed new German tariff provides for a duty of 10 *pfennig* per kilogram on crude caseine, while Galalith will have to pay only 3 *pfennig* per kilo. The intention was to undertake the complete manufacture of Galalith products, in order to facilitate their introduction into the German market. The proposition was made to purchase the French works, which are capitalized at 1,600,000 francs, for 25 per cent. of that sum, equal to 320,000 marks, to be paid in shares of the new company. The French works are favorably situated near Paris, on the banks of the Seine. In answer to a question why the French works have not succeeded, in view of the cheapness of their raw material, Mr. Hoff stated that almost the whole capital had been expended in experimenting before they were ready to market any products. The amalgamation was agreed to. The combined business is to be conducted under the name Internationale Galalith-Gesellschaft Hoff & Co., with headquarters at Harburg. The Harburg-Vienna company bring into the new company their Galalith business, representing an investment, in round figures, of 1,000,000 marks. A working capital of 520,000 marks has been agreed upon, to be contributed in cash by the French and German shareholders, in proportion to their respective interests. The total capital of the new company is 1,840,000 marks [= \$437,920]. The directorate is to consist of the board of the Harburg-Vienna company and two members of the board of the hitherto existing French company. In anticipation of the action above reported, the French company, at a general meeting early in December, voted to go into liquidation.

Articles made of Galalith are now being marketed for a great variety of purposes. It lends itself to manufacture in many different colors and shades. Among the articles listed in the advertisements of manufacturers are the following: Combs, handles for table knives, dessert knives, pocket knives, and razors; penholders, crayon holders, paper cutters, and letter openers; scale pans; stick and umbrella handles; electric bell pushes, switchboard levers, and other electrical apparatus; tobacco boxes, cigar holders, cigarette holders; brush backs, chess men, crochet needles, knitting needles; inlays and veneering for fine furniture, and so on.

## GERMANY.

THE Deutsche See-Telegraphen-Gesellschaft (Cologne) is

to be liquidated, and its system acquired by the Deutsch-Atlantische Telegraphen-Gesellschaft. The first named company was formed in 1896, with 5,560,000 capital, to establish telegraph communication between Germany and Spain [the Borkum-Vigo line, of 1115 miles, now working] and to acquire from Felten & Guillaume certain concessions for other connections. For five years dividends averaging 4½ per cent. were paid; there was none in 1902, and only 3 per cent. in 1903. The Deutsch-Atlantische Telegraphen Gesellschaft was formed in 1899, with 24,000,000 marks capital, to connect Germany and New York by cable, and now has two lines in operation between Borkum and New York, via the Azores, a distance of 4142 nautical miles. A fresh issue of capital was made for the purpose of absorbing the company first named.

=The published statement of last year's business operations of the General Electrical Co., of Berlin (Allgemeine Elektrizitäts Gesellschaft), shows a marked improvement. The gross profits were 10,439,000 marks [= \$2,484,482], against 6,984,000 marks [= \$1,662,192] in the preceding year. The number of employés was 27,487. The company declared a dividend of 9 per cent. on its share capital [of 60,000,000 marks] and carried large amounts over to reserve funds and to payments to directors and to benevolent endowment funds for employés. The company have established a department for the manufacture of automobiles, in which they have done a large business already.

=The firm Dr. Heinrich Traun & Söhne, formerly Harburger Gummikamm Co., recently purchased two pieces of real estate to round out the property on which their Harburg factories are located.

## GREAT BRITAIN.

THE fourth annual dinner of the employés of the European depot of the United States Rubber Co. (London) was held at the Holborn restaurant, on the evening of January 7, Mr. C. E. Pillinger in the chair and Mr. E. O. Cole, vice chairman. Mr. H. H. Holland, manager of the depot, was the principal guest, and there were present representatives of a number of firms in London and elsewhere with whom the house sustains business relations. The occasion, as in the past, proved a most enjoyable one to all present.

## AUSTRIA.

THE Prager Gummiwaaren-Fabrik Aktiengesellschaft, at Vysocan, near Prague, has been formally taken over by purchase by the Oesterreichisch-Amerikanischen Gummifabrik A.-G., who will continue it in operation, under the management of C. Ludwig Henkel, as director. The business will be conducted under the style of Prager Gummiwaaren-Fabrik Vysocan der Oesterreichisch-Amerikanische Gummifabrik Aktiengesellschaft. The factory at Prague was founded in 1897, and the company was compelled to go into liquidation some time last year. The liquidator's report showed an excess of assets over debts of 25,266 crowns [= \$5129], which was used to pay 10 crowns [= \$2.03] on each of the 2500 capital shares.

## SWITZERLAND.

J. LONSTROFF, the rubber goods manufacturer of Geneva, has enlarged his works at Carouge materially, and taken on the production of seamless rubber goods, making a specialty of nipples, of which he is reported to be turning out 100 gross per day. No other firm in Switzerland makes these goods.

## ITALY.

THE firm Pirelli & Co. (Milan) declared a dividend of 8 per cent. for the business year 1903-04, being the same rate as for the preceding year.



## INDIA-RUBBER GOODS IN COMMERCE.

## UNITED STATES IMPORTS OF RUBBER GOODS.

THE table herewith relates to values of imports of manufactures of India-rubber (not including Gutta-percha) into the United States for the past five fiscal years, ending June 30. The figures in the last column have not before appeared in print, having been obtained from Washington in advance of the official publication. The greatest gain in imports from any country is shown in the case of Germany, and covers toys, surgical novelties, hard rubber, and tires. The increase from France is also due in part to tires. The increase from Russia relates to rubber sponges. On the other hand, the imports from Great Britain have declined, during five years, largely more than half. It is not certain to what the decline is due, beyond the falling off in the importation of mackintoshes.

	1900.	1901.	1902.	1903.	1904.
Austria-Hungary .....	\$ 2,467	\$ 896	\$ 1,352	\$ 6,095	\$ 16,278
Belgium .....	4,788	10,162	21,792	55,532	34,547
Denmark .....	13	..	..	..	2
France .....	98,599	121,217	110,850	129,632	167,911
Germany .....	163,942	182,442	197,608	308,551	427,917
Italy .....	464	479	480	554	1,521
Netherlands .....	289	11,823	1,680	1,236	1,682
Russia .....	..	50	1,100	28,361	50,353
Spain .....	..	..	49	..	466
Sweden and Norway .....	25	3	70	5	..
Switzerland .....	138	65	..	31	367
United Kingdom .....	291,647	150,097	113,580	132,708	117,709
Nova Scotia, New Brun.	93	8	9	348	71
Quebec, Ontario, Mani.	682	439	527	1,716	1,175
British Columbia .....	353	354	117	68	79
Central America .....	4	..	..	..	280
Mexico .....	20	19	6	3	70
West Indies .....	3	2	4	39	42
Chinese Empire .....	32	49	27	..	4
Hongkong .....	6	439	379	300	746
Japan .....	23	80	112	125	907
British Australia .....	..	..	5	8	35
Total .....	\$564,088	\$478,663	\$449,756	\$665,972	\$821,562

## EXPORTS FROM THE UNITED STATES.

OFFICIAL statement of values of exports of manufactures of India-rubber and Gutta-percha, for November, 1904, and for the first eleven months of five calendar years:

MONTHS.	Belting, Packing, and Hose.	Boots and Shoes.	All other Rubber.	TOTAL.
November, 1904 .....	\$ 83,855	\$111,005	\$ 172,754	\$ 367,614
January-October .....	724,916	978,210	1,976,519	3,679,645
Total .....	\$808,771	\$1,089,215	\$2,149,273	\$4,047,259
Total, 1903 .....	777,371	890,835	2,276,179	3,944,375
Total, 1902 .....	671,906	958,085	1,825,127	3,455,118
Total, 1901 .....	547,171	942,333	1,603,047	2,992,556
Total, 1900 .....	480,848	593,664	1,401,907	2,476,460

## BRITISH EXPORTS OF RUBBER GOODS.

OFFICIAL statement of values, goods of British production, for four calendar years, Gutta-percha goods and waterproof apparel not included:

	1901.	1902.	1903.	1904.
Boots and shoes .....	£ 176,387	£ 171,557	£ 224,586	£ 205,068
Other sorts .....	1,086,028	1,052,887	1,201,681	1,213,944
Total .....	£1,262,415	£1,224,444	£1,426,267	£1,419,012
Pairs Footwear .....	1,537,008	1,723,536	2,382,360	2,074,224

## FOREIGN RUBBER GOODS TRADE OF CANADA.

CANADIAN imports of India-rubber and Gutta-percha manufactures for the fiscal year ended June 30, 1904, are officially stated to have been in value as follows:

IMPORTS.	United States.	Great Britain.	Other Countries.	Total Value.	Duties Collected.
Boots and shoes .....	\$154,191	\$ 341	\$ 73	\$154,605	\$ 35,399.11
Belting .....	46,298	1,076	..	47,374	12,583.84
Clothing and waterproof cloth .....	45,409	287,851	1,453	334,713	90,207.11
Hose .....	47,632	1,111	117	48,860	16,865.58
Packing and mats .....	49,572	1,392	67	51,031	17,696.95
All other .....	274,369	42,875	24,388	341,632	83,457.92
Total .....	\$617,471	\$334,646	\$26,098	\$978,215	\$256,210.51

Total, 1902-03... \$573,421 \$446,811 \$25,579 \$1,045,811 \$253,873.15.  
Total, 1901-02... 525,218 217,812 31,999 775,029 201,698.64  
Total, 1900-01... 434,590 154,944 21,738 611,272 163,012.44  
Total, 1899-00... 359,037 118,111 19,083 539,061 149,006.80  
The share of Germany in this trade has declined from \$22,909 to \$18,877, and Austria from \$1005 to \$950. The share of France increased from \$1090 to \$4638, and Russia's from \$54 to \$1179.

There may also be noted the following imports, not classified by the customs as "rubber goods," but having a relation to the industry:

IMPORTS.	United States.	Great Britain.	Other Countries.	Total Value.	Duties Collected.
Webbing, elastic and non elastic .....	\$132,791	\$65,754	\$3,604	\$202,149	\$36,312.92
Stockinettes for rubber footwear .....	59,606	11,220	..	70,826	10,046.90
Duck, for rubber belting and hose .....	177,219	313	..	197,532	free.
Rubber thread .....	2,108	..	..	2,108	free.

## EXPORTS OF CANADIAN RUBBER GOODS.

To—	Value.	To—	Value.
Great Britain .....	\$39,378	Turkey .....	\$1,519
Australia .....	31,583	British Guiana .....	786
New Zealand .....	24,445	Brazil .....	521
Newfoundland .....	14,376	Chile .....	698
Belgium .....	1,700	West Indies .....	327
Italy .....	2,099	British Africa .....	647
		United States .....	\$ 9,994
		Total .....	\$128,067
		Total, 1903 .....	142,891
		Total, 1902 .....	322,572
		Total, 1901 .....	151,656

## RUBBER FOOTWEAR IN CHINA.

ACCORDING to the German paper, *Das Handels Museum*: "Rubber shoes are coming more and more into favor among the poorer classes at Canton. The import of this class of goods, which in 1899 was only 8761 pairs, was 42,552 pairs in 1902, and in 1903 reached the high total of 234,496 pairs." The figures for Canton, however, do not represent the whole Chinese consumption of rubber footwear. In this connection may be mentioned the official returns of British exports of rubber shoes to China and also to Hongkong—the latter doubtless going in large part to China:

	1901.	1902.	1903.
China .....	pairs 107,716	66,060	24,456
Hongkong .....	164,460	173,040	549,624

The exports of rubber footwear from the United States to the same ports for the last four fiscal years have been:

	1901.	1902.	1903.	1904.
China .....	pairs 1,634	2,237	3,628	1,417
Hongkong .....	1,634	5,468	91,942	106,000

HARD RUBBER HANDLES.—A late catalogue of table cutlery and other knives, made by the long established Goodell Co. (Antrim, New Hampshire), includes a number of items of table knives and forks with handles of hard rubber and celluloid.

## RECENT RUBBER PATENTS.

## UNITED STATES OF AMERICA.

ISSUED DECEMBER 13, 1904.

- N**O. 777,102. Cow milking machine. W. S. Howell and W. C. McKenzie, Moultrie, Ga.
- 777,213. Plate for horseshoe pads. G. Knapp, assignor of one-half to H. Hayden, both of Brooklyn, N. Y.
- 777,275. Packing [comprising parallel strands of flax, covered with a composition of rubber and graphite.] A. L. Cole, Auburndale, and J. L. Sackett, Melrose, Mass.
- 777,292. Wheel tire. [A rubber tire having a tread portion and a base portion projecting at its sides beyond the tread portion, said base portion being built up of a series of superimposed woven wire fabrics, and the tread portion being made of resilient rubber compound which projects into and fills the interstices of the base portion, all of the rubber referred to being vulcanized; the edges of the base portion engage longitudinal retaining wires within the flanges of the rim channel.] A. H. Marks, Akron, Ohio.
- 777,293. Vehicle tire. [A rubber tire composed of rectangular pads, each with a base portion composed of a series of woven wire fabrics, and each provided with a retainer consisting of a bolt and nut, one member of said retainer being vulcanized within the resilient or tread portion of the pad.] A. H. Marks, Akron, Ohio.
- 777,294. Vehicle tire [involving the principle of sectional rectangular pads]. A. H. Marks, Akron, Ohio.
- 777,314. Fastening for massive tires. W. Struck, Friedenau, near Berlin, assignor to B. Polack, a firm of Wallershausen, Germany.
- 777,315. Soft-tread horseshoe. C. B. Taylor, Toledo, Ohio.
- 777,464. Vehicle wheel tire. C. C. Worthington, Dunnfield, N. J.
- 777,617. Inflatable vehicle tire. J. W. Farnoff, assignor of two-thirds to H. Koons, E. L. Koons, and M. A. Reiman, executors of said H. Koons, deceased, all of Buffalo, N. Y.
- 777,618. Fastening for vehicle tires. *Same*.

## Trade Marks.

- 43,830. Waterproof dress fabrics. S. D. French & Co., New York city. *Essential feature*.—The word IMPERVIETTE. Used since Oct. 22, 1904.
- 43,831. Dress shields. Levi & Blum, New York city. *Essential feature*.—The figure of a dancing girl having outstretched arms and holding in each hand an edge of her skirt. Used since Oct., 1904.
- 43,855. Elastic web catheters and bougies. F. A. Koch, New York city. *Essential feature*.—The representation of a screw piercing a diamond. Used since July 1, 1904.

ISSUED DECEMBER 20, 1904.

- 777,683. Rubber boot or shoe [with leather sole]. H. C. Mason, Providence, R. I., assignor to Hood Rubber Co.
- 777,718. Puncture proof cutter for pneumatic tires. J. D. Dobelman, Chicago.
- 777,719. Pneumatic tire for vehicle wheels. G. R. Fenner and F. W. Trash, London, England.
- 777,768. Tire shield [elastic and detachable]. R. B. Ayres, East Orange, N. J.
- 777,812. Tire valve. G. H. F. Schrader, assignor to A. Schrader's Son, New York city.
- 777,825. Lap robe [with waterproof interlining]. F. H. Wilkes, Medford, Mass.
- 777,979. Pneumatic tire. J. F. de Savignac, Marseilles, France.
- 777,992. Toy [comprising a hollow elastic ball and cap exploder]. M. L. Wicks, Jr., Los Angeles, Calif.
- 778,136. Pneumatic tire. P. Magnus, Northcote, Victoria, Australia.
- 778,153. Tire. [Pneumatic; with a plurality of sections, forming a continuous cylinder.] J. Sullivan, Buffalo, N. Y.

## Trade Marks.

- 43,861. Waterproof textile fabrics. Duncan & Stenz, New York city. *Essential feature*.—The word WATERWITCH. Used since July 21, 1904.
- 43,901. Rubber-lined hose. Bowers Rubber Co., San Francisco. *Essential feature*.—The representation of an orange-colored woven textile covering for rubber-lined hose, having incorporated therein two broken parallel longitudinally-extending white distinguishing lines, formed by the warps incorporated in the fabric. Used since March 1, 1904.

- 43,902. Rubber-lined hose. Bowers Rubber Co., San Francisco. *Essential feature*.—The representation of a red-colored woven textile covering, with other features as stated above. Used since March 1, 1904.

ISSUED DECEMBER 27, 1904.

- 778,227. Cow milker. F. M. Devore, assignor to M. A. Devore, both of Thompson, Iowa.
- 778,291. Fountain pen. J. Weeks, Brooklyn, N. Y.
- 778,311. Fountain syphon syringe. L. S. Grisell, Clyde, Kansas.
- 778,407. Fountain pen. C. A. Faber, Toledo, Ohio.
- 778,495. Pneumatic tire or other flexible tubular article. A. H. Marks, Akron, Ohio.
- 778,496. Pneumatic tire or other flexible tubular article. *Same*.
- 778,497. Pneumatic tire or other tubular flexible article. *Same*.
- 778,557. Hose coupling. J. Szepe, Allegheny, Pa.
- 778,742. Paste fastening for rugs or carpets. C. C. Conner and T. Grimler, New York city.
- 777,768. Shoe protector for wheel tires. C. A. Worthington, Trenton, N. J.

ISSUED JANUARY 3, 1905.

- 778,850. Cushion tire. W. H. Emond, Boston.
- 778,909. Cushion horseshoe. A. Simmons, Milton, Mass.
- 778,936. Hose coupling. C. B. J. Witmond, New York city.
- 778,948. Rubber tire. C. H. Bryan, Chicago, Ill.
- 778,949. Storm robe and vehicle cover. H. M. Burke, Niagara Falls, N. Y.
- 778,997. Feeder for fountain pens. G. S. Parker, Janesville, Wis.
- 779,034. Means for fastening tires to wheel rims. C. G. Fawkes, Denver, Colo.
- 779,070. Pneumatic tire clamp. H. W. Cagle, Marion, Ill.
- 779,148. Horseshoe attachment. E. L. Abbott, assignor to C. E. Abbott, both of New York city.
- 779,163. Pneumatic spring for vehicles. H. E. Irwin, Galesburg, Ill.
- 779,164. Syringe [for the administration of medicaments]. A. B. Jamison, New York city.
- 779,335. Wheel tire. [Pneumatic.] A. J. White, Akron, Ohio.
- 779,363. Vehicle tire. [Solid rubber.] W. F. Howe, Chicago.
- 779,379. Process of manufacturing rubbered cord for use in rubber articles. T. Sloper, Devizes, England.

## Trade Mark.

- 43,958. Dress shields. [The Omo Manufacturing Co., Middletown, Conn. *Essential feature*.—The word ZOUAVE. Used since September 1, 1903.

[NOTE.—Printed copies of specifications of United States patents may be obtained from THE INDIA RUBBER WORLD office at 10 cents each, postpaid.]

## GREAT BRITAIN AND IRELAND.

## PATENT SPECIFICATIONS PUBLISHED.

The number given is that assigned to the Patent at the filing of the Application, which in the case of those listed below was in 1903.

\* Denotes Patents for American Inventions.

[ABSTRACTED IN THE OFFICIAL JOURNAL, DECEMBER 1, 1904.]

- 17,707 (1903). Tire valve. O. Wellschläger and F. Latté, Berlin, Germany.
- 17,813 (1903). Toy balloon. B. G. Meszaros and G. Weber, Hamburg, Germany.
- \*17,857 (1903). Machine for applying wax-like substances to fabrics to render them water repellant. C. Lichtenstadt, Chicago, Illinois.
- 17,886 (1903). Boot with waterproof insole. G. T. Hawkins, Northampton.
- 18,073 (1903). Hose Reel and Sprinkler. W. H. Freeman, King's Heath, Birmingham.

[ABSTRACTED IN THE OFFICIAL JOURNAL, DECEMBER 1, 1904.]

- \*18,242 (1903). Swimming glove. C. G. Ammon, Pittsburgh, Pennsylvania.
- 19,291 (1903). Exercising apparatus. R. Fiedler, Berlin, Germany.
- 18,365 (1903). Elastic air pressure ball [for producing currents of air in spray producers, medical syringes, photographic shutters, and the like]. J. S. Fairfax, London. (S. A. Tidey, Montreux, Switzerland.)



- 18,385 (1903). Golf ball. P. A. Martin, Birmingham.  
 \*18,421 (1903). Solid rubber tire. L. G. Nilson, New York city.  
 \*18,483 (1903). Hose coupling. W. R. Amos, Saxton, Pennsylvania.

[ABSTRACTED IN THE OFFICIAL JOURNAL, DECEMBER 31, 1904.]

- 18,564 (1903). Pneumatic tire [with spiral springs embedded in the cover to increase durability]. R. J. Routledge, Carlisle.  
 \*18,770 (1903). Golf ball. C. E. Boutwood, Hinsdale, Illinois.  
 18,771 (1903). Football valve. J. McKay, Cape Town, South Africa.  
 18,876 (1903). Rubber tread for metal tires of vehicles. D. P. Goodwin, Kidderminster, Worcestershire.  
 19,062 (1903). Life saving and swimming appliance. W. R. Cornell, East Dulwich, Surrey.  
 19,085 (1903). Pneumatic tire [with non-slipping cover]. H. Sandwith, London.  
 \*19,091 (1903). Pneumatic tire. [Described in THE INDIA RUBBER WORLD, February 1, 1904—page 171.] T. J. Cooper and J. D. Smith, Paterson, New Jersey.

[ABSTRACTED IN THE OFFICIAL JOURNAL, DECEMBER 31, 1904.]

- 19,793 (1903). Inkstand [having reservoir of rubber]. H. K. Weilan, Helsingfors, Denmark.  
 19,806 (1903). Carpet sweeper [having cushions and wheel tires of rubber]. F. King, Manchester.  
 19,812 (1903). Valve for footballs. A. W. Wyatt, Manchester.  
 19,930 (1903). Pneumatic tire [with outer cover made reversible]. G. T. Shilton and A. Schultze, Greymouth, Westland, New Zealand.  
 19,949 (1903). Pneumatic tire [protected by a metallic tread band, in sections]. W. T., W. H., and P. C. Philipson, Bolton.  
 19,960 (1903). Pneumatic tire inner tubes [made up of overlapping sections which can be inflated simultaneously]. W. A. and H. S. Hollis, Hove, Sussex.

[ABSTRACTED IN THE OFFICIAL JOURNAL, DECEMBER 31, 1904.]

- 19,413 (1903). Toy. [Involving an elastic bag, inflatable by means of a mouthpiece and valve, and having a reed and stoppiece.] H. Metzger, Paris, France.

#### PATENTS APPLIED FOR.—1904.

Space is given here only to Applications for Patents on Inventions from the United States.

- 25,962. J. H. Toole, London. Cushion tire. Nov. 29.  
 27,722. Ferdinand Ephraim, London. Process and apparatus for the separation and recovery of gum from rubber plants. Dec. 19.  
 28,579. H. A. Palmer, London. Pneumatic tire. Dec. 28.  
 26,286. O. Imray, London. Improvements in pneumatic tires. (Harry A. Palmer, United States). Dec. 31.  
 29,396. H. H. Lake, London. Improvement in golf balls. (The Perfect Golf Ball Co., United States). Dec. 31.

#### GERMAN EMPIRE.

##### PATENTS GRANTED.

- 157,807 (Class 63e). Elastic tires. A. van der Stichelen, Ghent. Dec. 14, 1904.  
 DESIGN PATENTS GRANTED [GEBRAUCHSMUSTER.]  
 238,287 (Class 47b). Spiral wound hose. Rheinische Gummi- und Celluloid-Fabrik, Mannheim-Neckarau. Dec. 7, 1904.  
 239,011 (Cl. 39b). Rubber plate with irremovable metallic gloss. Gebrüder Levenstein, Berlin. Dec. 21.  
 238,984 (Cl. 77a). Elastic rubber girdle with flexible handles, for gymnastic practice. K. Meyer, Asch. Dec. 21.  
 237,605 (Cl. 77a). Grip for tennis rackets, with inlaid strips of rubber in handle. J. Süsskind, Hamburg. Dec. 21.  
 238,305 (Cl. 304). Vaginal syringe, with soft rubber nozzle. A. Baumert, Berlin. Dec. 14.  
 237,921 (Cl. 63a). Hand grip for automobiles. Dr. M. Thierfelder, Zwickau. Dec. 7.  
 237,411 (Cl. 77a). Handle for tennis rackets. J. Süsskind, Hamburg. Dec. 14.  
 237,679 (Cl. 30g). Nipple for nursing bottle, the mouthpiece being bent at an angle. H. Daubitz, Weissensee. Nov. 16.  
 237,865 (Cl. 45g). Rubber sponge insert for a milk separating drum. E. Zeter, Hogenau i. E. Nov. 23.

##### PATENTS APPLIED FOR.

- 25,622 (Class 8a). Device for scouring rubber hose. C. W. L. Martin, Martens i. W. Nov. 23, 1904.  
 14,693 (Cl. 63e). Protective device for pneumatic tires. H. David, Paris, France. Nov. 30.

#### THE FRENCH REPUBLIC.

##### PATENTS ISSUED (WITH DATES OF APPLICATION).

- 345,131 (July 20, 1904). Huez—Safety valve for pneumatic tires, to prevent bursting when the air within becomes expended by heat.  
 345,150 (July 26). G. Nadig—Hydro-pneumatic tire.  
 345,248 (July 30). Société Générale de Procéder d'Extraction du Caoutchouc. Machine for taking the bark off Caoutchouc lianes.  
 345,258 (July 23). A. Tzambert—Protector for tubes of pneumatic tires.  
 345,284 (Aug. 1). B. F. Kenna—Solid rubber tire.  
 345,377 (Aug. 4). L. Montagnie—Rubber phototypic plates, or rubber cloth for the same purpose.  
 345,509 (Aug. 3). E. Lapisse—Product having a rubber and a cork base.  
 345,549 (Aug. 13). E. E. Grapin—Pneumatic tire.  
 345,563 (Aug. 3). F. Boyer & C. Leboeuf—Anti-skidding and imperforable tire cover.  
 345,575 (Aug. 13). E. Henry—Safety valve for pneumatic tires.  
 345,602 (Aug. 16). Société anonyme des Pneus Cuir Samson—Improvement in pneumatic tires.  
 345,605 (Aug. 16). Electric Moulding and Heating Co.—Improvement in heating apparatus, particularly for use in vulcanizing India-rubber.  
 345,631 (Aug. 2). L. A. Garchey and L. Coin—Pneumatic tire.  
 345,645 (Aug. 17). H. A. P. Villevé—Protecting felly for pneumatic tires.  
 345,793 (Aug. 8). Raymond B. Price, Chicago, Illinois—Process of reclaiming vulcanized rubber waste.

[NOTE—Printed copies of specifications of French patents may be obtained from R. Bobet, Ingenieur-Conseil, 16 avenue de Villiers, Paris, at 50 cents each, post paid.]

#### LEOMINSTER'S COMB INDUSTRY.

THE Leominster Comb Co. (Leominster, Massachusetts) have bought land upon which to erect extensive additions to their plant, including what is intended to be the largest horn and hoof pressing factory in the world. The corporation, capitalized at \$100,000, is owned principally by Henry F. Sawtelle, John Boyle, and F. A. Clapp, the latter of whom merged his business with the Comb company in February, 1903. Mr. Clapp started, in 1902, to press horn to supply the comb and hairpin factories; previously each factory had its own presses. As a result of his work the factories using horn have been concentrating at Leominster until that town, it is stated, now supplies 98 per cent. of the horn and hoof hairpins used in the world, together with a large proportion of the horn combs. The Leominster Comb Co. now require the horns of from 30,000 to 40,000 cattle daily, which are supplied by 22 packing houses, besides the imported horns.

The Williams & Winn Comb Co. (Leominster) have purchased additional property, with a view to making their comb factory one of the largest in the horn and celluloid industry. The company is composed of George L. Winn, Fred H. Cook, and Thomas F. Hardy, the senior member, A. W. Williams having died several years ago.

\* \* \*

THE chief of the fire department of Worcester, Mass., has arrived at an agreement with the manufacturers of combs and other goods from celluloid, whereby the celluloid required in their business will be stored in detached buildings, only enough for one day's work to be taken to the factory each morning.

DEARER FOOD AT PARÁ.—News from the Amazon continues to point to higher rather than lower prices for rubber. Thus Mr. Consul Aymé reports, recently: "On January 1, 1905, all [import] duties on flour, dried vegetables, canned goods, and foods in general will probably be advanced from 40 to 150 per cent."

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CLEVELAND, OHIO.

## NEW GOODS AND SPECIALTIES IN RUBBER.

## "REPUBLIC" NON-SKID TIRE COVERS.

**N**EXT to the construction of tires themselves the most pressing question to-day in regard to automobile tires apparently is that of means for their protection against puncture and for the prevention of skidding. The illustration herewith relates to an invention the object of which is to provide a simple and efficient protective cover for automobile and other tires, for the purposes referred to, and also to reduce the continual wear of the tire from its ordinary abrasion. This protective covering consists of a flexible backing for the tread, carrying rivets whose heads are on the outer side, said rivets serving to attach the backing to the tire, and also, by means of their projecting heads, to prevent skidding. These tread bands are now being made from the finest chrome tanned leather, properly fitted, and securely vulcanized to the outer portion of the tire in the position indicated by the illustration. They may also be made of rubber, or a combination of leather and rubber. They are made under United States patent No. 717,263, granted December 30, 1902, to Herbert R. Palmer, Cleveland, Ohio. [The Republic Rubber Tire and Shoe Co., No. 138 West Fifty-second street, New York.]



## TOY "DRUGGISTS' SUNDRIES."

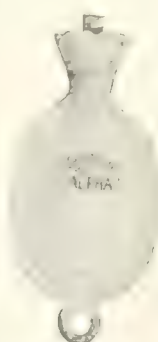
It is perhaps not generally known, but an extensive business is done in miniature rubber goods of the kind here illustrated. It is to be presumed that these goods are a part of the household equipment of every prosperous doll. Certain it is that about the holiday season gift seekers purchase them with avidity, and the demand increases with each year. The most popular goods are a perfect little atomizer with hard rubber spray-



2 1/2 in. long  
1 1/4 in. wide.



2 in. high;  
1 1/4 in. wide.



3 in. high;  
1 1/4 in. wide.

ing device and a tiny rubber bulb which really atomizes; a miniature hot water bottle which no doubt has brought comfort to many a sick doll; and a tiny nursing bottle designed for the comfort of dolls in arms. These toys are but 2 or 3 inches in height and about 1 1/2 in width, and are known as the "La Petite" goods, being manufactured by Parker, Stearns & Sutton, New York.

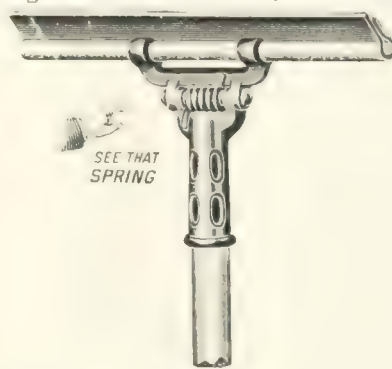
## "TORPEDO-ASBESTOS" PACKING.

A NEW line of packings is made of a combination of India-rubber and asbestos, for which is used a special heat-resisting

rubber compound which can be so thoroughly incorporated with the asbestos fiber that it is impossible for moisture or steam to affect the packing. The new material is mentioned as particularly adapted to situations where high pressure steam is used. On a trial run of the United States torpedo boat *Stringham* this packing stood a test of 300 pounds without losing a joint. "Torpedo-Asbestos" is made up into sheet packing and rod packing and boiler gaskets, special patented machinery being used in the manufacture. [Osgood Sayen, No. 21 North Thirteenth street, Philadelphia.]

## "COMMON SENSE" WINDOW CLEANER.

THE window cleaner illustrated herewith, while not new as regards the use of rubber, involves a new feature in the adjust-



SEE THAT  
SPRING

ability of the hinge and spring, by which the rubber will adjust itself to all conditions of work, regardless of the angle of the pole. The operator is enabled thereby to sweep the window pane clean from top to bottom at one continuous stroke, while with any other device the pole is liable to interfere

with the floor or sidewalk. It is stated that the rubber will wear much longer on account of yielding to the pressure, and works very much smoother. When worn out the rubber strip can easily be replaced and at small expense. [F. H. Smith Manufacturing Co., Nos. 18-30 West Randolph street, Chicago.]

## AUTOMOBILE TIRE REPAIR OUTFIT.

THE repair outfit illustrated herewith has been placed on the market to meet the requirements of individual owners of automobiles

and even small garages. Its contents have been selected with a view to enabling automobilists to repair any ordinary injury to any of the standard detachable motor tires. The Outfit comprises a wrench of suitable size, with combination screwdriver; soapstone, cement, a handy tool for roughing the surface of inner tubes, patches, patching cement, wide tape, tire detachers, and special pigskin sectional cover to strengthen the tire at the point of repair; friction duck, patching rubber, and parts for valves. The whole is neatly placed in a serviceable box, in compartments arranged to prevent the mixing up of contents; retail price, \$5. [The Hartford Rubber Works Co., Hartford, Connecticut.]





## A TOILET APPLIANCE FOR AUTOMOBILISTS.

THIS illustration relates to a new convenience designed for the use of automobilists and described as a Water Tank and Wash Basin, combined. It is waterproof and air tight, and collapsible when not in use. It comprises a wash basin which the traveler on a dusty road may often find serviceable, and also a tank for a reserve supply of water. In cold weather the basin and tank may be used as a foot warmer if filled with hot water, which may be used also for warming the hands. The appliance has pockets on the side for soap and towels. It is the invention of Samuel J. Rosenfeld, who has applied for a patent, and organized a company for manufacturing the article on an extensive scale. [Rubber Appliance Co., Springfield, Massachusetts.]



## SCHWEITZER'S SANITARY RAZOR CLEANER.

THE drawing herewith is a perspective view of a rubber razor cleaner constructed of soft rubber, in accordance with an invention by Henry Schweitzer, and covered by United States patent No. 708,262. The upper surface of the edge being scalloped, the notches afford different curved surfaces intended for contact with razor blades of different shape. The device is easily cleaned by holding it under running water, and may be placed under the shaving mug when not in use. It may be employed also as a lather cup if desired, and for this purpose may be made of any suitable depth. [The Schweitzer Barber Supply House, Altoona, Pennsylvania.]



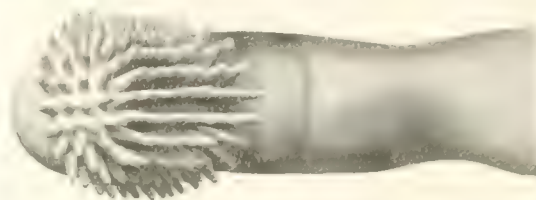
## MARBLE'S "SOLID COMFORT" SEAT PAD.

THE object of this device is to prevent sportsmen and others from becoming wet and uncomfortable when it is necessary to sit down on a snowy log, damp bank, or in a leaky duck boat. It is worn outside the trousers and may be instantly applied or detached. Waterproof cloth is used in its manufacture, with an inner layer of rubber, the whole being durably bound in yellow leather, and perfectly waterproof. The seat pad fastens to the trousers by means of two metallic hooks connected to the pad by adjustable bands of elastic webbing, and a narrow leather strap about each leg, midway between hip and knee. It is made in two sizes—16 and 18 inches—and is referred to as being extremely durable. Retail price, \$1 50. [Marble Safety Axe Co., Gladstone, Michigan.]



## A RUBBER TOOTHBRUSH.

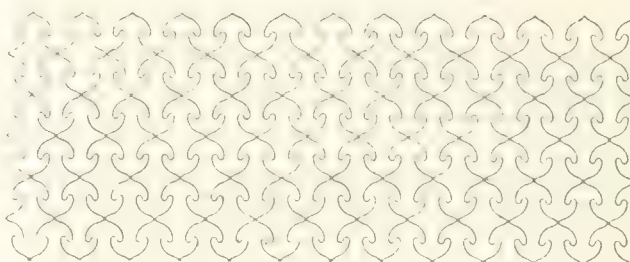
THE illustration herewith results from photographing a novelty in the way of a rubber toothbrush, in the position on a



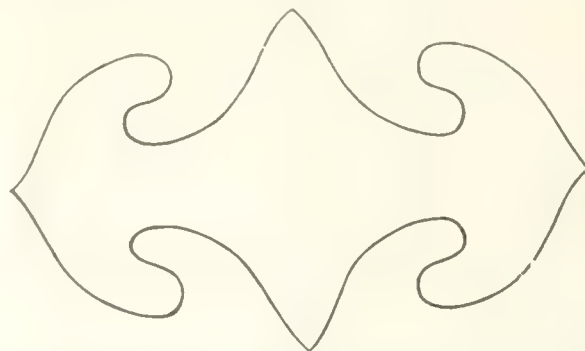
finger in which it is designed to be held when in use. The idea is that it is available for reaching the teeth, on the inner side, more thoroughly than any other form of toothbrush, and that it may prove especially desirable for invalids and persons having tender gums. This article has been seen in a number of American drug stores, having been supplied through a New York importing house. The retail price is 25 cents.

## THE "ANCHOR" RUBBER TILE.

THE illustrations herewith relate to a new design for rubber floor tiling, one showing the outline of the die used in cutting



out the pattern, and another giving an idea of the general effect of the pattern. Design patent No. 36,920, issued by the United States May 17, 1904, to John A. Sloan, relates to the ar-



tile herewith illustrated. It is understood that construction patents are pending. The tiling is of semi hard rubber, without the use of any fabric for backing. [Anchor Tile Co., No. 137 East State street, Trenton, New Jersey.]

RICHARD GUENTHER, of Oshkosh, Wisconsin, and formerly United States consul general at Mexico, was asked recently, in view of Consul Conley's unfavorable report on rubber culture, for an expression, and he replied, according to the *Milwaukee Wisconsin*:

I have reread my report on India-rubber, dated Mexico City, October 24, 1890, when I was United States consul general at that city, and I have not since that time come into possession of any facts which would prompt me to rescind any of the statements I then made - - - I am still of the opinion that rubber plantations in Mexico, if managed by experienced men in localities adapted for rubber trees, will prove profitable.

## TIRES AT THE MADISON SQUARE GARDEN SHOW.

THE fifth annual automobile show, at Madison Square Garden (New York), under the auspices of the Automobile Club of America and the National Association of Automobile Manufacturers, on January 14-21, was larger and more interesting than any of its predecessors, measured both by the number and scope of the exhibits and by the attendance. In these respects each of the annual shows has marked a distinct advance over its predecessors, and as one show follows another they appear to become more and more dedicated to business rather than to the gratification of mere curiosity on the part of the public.

From all accounts the makers of automobiles who were exhibitors at Madison Square—and they represented by far the greater part of the trade in the United States—were thoroughly satisfied with the results of the show, with regard to business actually done during the week and also to the evidence presented of the great hold which the automobile has gained upon the American public, and the promise which exists of the permanency of the demand for automobiles of the best types. This is not the place for a critical review of the progress made in automobile building on this side of the Atlantic, or a comparison between the products of the industry here and abroad. The comment seemed universal, however, that whatever advantages in point of quality and utility the European made automobiles may have possessed five years ago—when the foreign builders had the advantage of several years in point of time—the discrepancy has steadily been overcome until now any difference is difficult to discern.

The interest to the rubber trade in the growth of automobilism lies, of course, in the demand which it has developed for rubber tires. Not to mention the tires shown on 250 or more vehicles of every size and type, on exhibition, special displays of their products were made by the leading producers of automobile tires, the list being substantially the same as last year. In regard to the tires shown, it may be that the casual observer would not have noticed any special change from the features of last year's show. Interviews with the exhibitors, however, would have revealed in every case that much thought and effort had been devoted during the year to increasing the efficiency of the tires of the various types, with the result of numerous improvements having been wrought, so that the buyer of rubber tires this year may hope for a better return for his money than at any time in the past.

The "clincher" type of tire still predominates, no single tube or cushion tire being shown—unless specially asked for. Solid tires were shown in several booths, but these were meant for the heavier type of commercial vehicles, and two exhibits were devoted to this type of tire alone. It may be said, however, that these two companies hope to capture a part of the demand from the owners of pleasure vehicles, on account of the admitted fact that rendering a tire punctureless robs it to a certain degree of resiliency.

This last reference leads up to the mention of the many tire protective devices which were to be seen on every hand. Several of the tire exhibits embraced protective covers of leather for pneumatic tires, some of them being attached by means of rivets with projecting heads designed to give a rough surface to the tread and thereby prevent skidding. Bailey's "Won't Slip" automobile tire was shown prominently in the exhibits of companies licensed to make it, the point being made that a

tread with an all-rubber surface is more efficient than where other materials are attached to the rubber, while a neater effect is produced.

## THE TIRE EXHIBITS IN DETAIL.

THE DIAMOND RUBBER CO., (Akron, Ohio).—Principal feature, the "Diamond 1905 Detachable" clincher tire, in respect to which attention was called to new features of construction—the "wrapped tread" by which "every fiber does its share of work;" more time given to vulcanizing than formerly; and semi-curing of the skeleton separately from the tread. The latter feature helps to render possible the fitting of a tire with three or four new treads before it is finally worn out. "Diamond" single tube tires were shown, and "Diamond" side-wire tires, licensed under the Swinehart patent. Also, Bailey's "Won't Slip" tires, leather non-skidding covers, rubber covered lugs, inner tubes, repair kits, and so on. One distinct novelty shown was a rim with a turn-buckle attachment, which places this company in the field of making mechanically fastened tires.

REPRESENTATIVES.—W. B. Miller, secretary; O. J. Woodard, general sales representative; Branch managers: Samuel F. Randolph, New York and Philadelphia; O. S. Tweney, Chicago; W. M. Perrett, Detroit; W. J. Foster, Boston; N. E. Oliver, Buffalo; G. J. Bradley, Cleveland; Albert G. Partridge, New York salesman.

FIRESTONE TIRE AND RUBBER CO., (Akron, Ohio).—The Firestone side-wire solid tire, for automobiles, trucks, fire engines, and other vehicles, heavy or light. Sections of tires of very large dimensions were shown, up to 8 inches in width, the list price being \$183.50 for tire, for wheels 36 inches in diameter over all, or \$734 per set of four, with \$50 added for channel rims. The company are seeking to create a demand for these tires for pleasure vehicles, no less than for commercial use.

REPRESENTATIVES.—H. S. Firestone, president and general manager; S. G. Carkuff, assistant general manager; J. M. Gilbert, sales manager, Akron; W. P. Berrien, New York manager; A. J. Greene, Boston manager; J. L. Gibney, Philadelphia manager; Walter A. Wells and H. E. Esterly, New York salesmen.

THE FISK RUBBER CO. (Chicopee Falls, Massachusetts).—The Fisk mechanically retained detachable tire, which has been the chief feature of the company's exhibits for two seasons past, appeared with a few changes of detail. For instance, by grooving the retaining bands, the clamps do not project so far outside the rim, and hence are not now liable to come into contact with the tire; besides, by a new arrangement, the clamps are more easily applied than before, and the nut used holds the clamp bolt more securely.

REPRESENTATIVES.—Harry T. Dunn, president and general manager; Ernest H. Brandt, assistant general manager; J. W. Bowman, eastern sales manager; F. C. Riggs, western sales manager. Branch managers: E. A. Hoffman, New York; D. T. Keenan, Buffalo; A. C. Bolster, Syracuse; James L. Gibney, Philadelphia; George A. Campbell, Boston; Morris Penrose, Cleveland; E. H. Broadwell, Detroit; B. H. Pratt, Chicago; Mr. Kiener, Montreal.

G & J TIRE CO. (Indianapolis, Indiana).—This company controls the patents under which the "Clincher" type of tires are made in the United States. They also market under their name the product of the Indianapolis Rubber Co., the makers of the tires shown in this booth. Special attention was called to the new thread fabric used in these tires, of which a full description was given in THE INDIA RUBBER WORLD, December 1 (page 78). The new "G & J" tire is made with beads or clinches that are very long, and flat at the base, giving the best possible bearing of the clinches in the rim; coupled with the fact that the tire is molded in as nearly a true circle as pos-



sible, and the fitting of the tire with a flap, forming a strong frictional contact with the clinches, the effect is attained of a tire fitting the rim so firmly as to prevent any creeping. Hence lugs or clamps have been discarded, and will be supplied only on orders. The corrugated tread is the standard at this factory, though smooth treads may be specified.

REPRESENTATIVES.—H. O. Smith, president; C. H. Sample, secretary; C. L. Pepper, treasurer; H. A. Githens, general traveling representative; W. G. Whitlock, factory representative; Arthur T. Smith, New York, eastern representative.

**THE B. F. GOODRICH CO. (Akron, Ohio).—**The tires here were the same as last year: The "Goodrich clincher" (with the result of a year's study and experience shown in modifications designed to increase efficiency) in the lead, and most of the other types of tire for which an important demand exists ready to be shown to inquirers. The company manufacture solid tires of the wired-on and side-wire type, and give prominence to Bailey's "Won't Slip" tire in the way of non skidding devices. The award of the Grand Prize at the St. Louis World's Fair to the "Goodrich clincher" tire was prominently advertised.

REPRESENTATIVES.—F. Y. Stewart, manager New York branch; Harry Sheldon, assistant manager; and E. H. Nibrette and E. C. Berham, salesmen; A. J. Wilks, manager tire department, and O. R. Cook, general representative, Akron; J. W. Lyman, Philadelphia; O. R. Rutherford, Buffalo; H. E. Miller, Detroit; H. Limric, Boston.

**THE GOODYEAR TIRE AND RUBBER CO. (Akron, Ohio).—**A distinct novelty was shown in the shape of a "Universal rim" for detachable pneumatic tires. It consists of (1) a flat steel band, rolled to shape and adapted to fit any wheel with a wooden felloe; (2) two removable (endless) steel flange rings; and (3) an open steel locking ring, to lock the flange rings in position, the tire having first been put on. The flange rings being reversible, may be used either to engage the ordinary clincher type of tire, or for a newly designed "Goodyear detachable." The Goodyear endless solid tire was much in evidence in this booth, with the detachable flange fastening in use hitherto. With a modification that was shown, the endless solid tire may be used on the "Universal" rim.

REPRESENTATIVES.—F. A. Seiberling, general manager; Charles W. Seiberling, secretary; treasurer, G. M. Salsman, manager vehicle tire department; William T. Teagan, Boston manager; A. F. Osterloh, Chicago manager; Kirke B. Harwood, New York manager; H. G. Fitler, Philadelphia, manager; George S. Atwater, New England representative; C. M. Cordell, Southern states representative.

**THE HARTFORD RUBBER WORKS CO. (Hartford, Conn.).—**This exhibit gave equal prominence to the "Hartford clincher" and "Perfected Dunlop detachable" tires. The former is the same tire made for some time past under the "G & J" patents. The new Dunlop tire feature was first exploited a year ago, but during the year the beads (retaining rings) have been changed from circular to elliptical section, with the effect of providing a deeper channel, so to speak, and holding the tire in place more firmly. Lately an extensive campaign of education has been carried on by the company, through the employment of traveling representatives to give public demonstrations of applying and detaching the Dunlop tire, with the effect apparently of largely increasing the demand. The original allotment at the Garden included a space for the India Rubber Co. (New Brunswick, New Jersey), but before the opening of the show the works of that concern became Factory No. 3 of the Hartford company, which devoted the space referred to wholly to Dunlop tires. Counting the Hartford company's main exhibit, and that of Morgan & Wright, the Dunlop tire was thus shown in three booths. The Turner endless solid tire was shown by the Hartford company, and a very complete and serviceable automobile tire repair kit, which is described on another page of this paper.

REPRESENTATIVES.—William Seward, Jr., and Justus D. Anderson, vice-presidents; James W. Gilson, secretary and treasurer. Branch managers: S. E. Conner, Chicago; Frank D. Kesler, Philadelphia; J. E. McMaster, Detroit; R. Benson, Boston; James How, Buffalo. Salesmen: R. Clunan, R. H. La Porte, H. Holdredge, H. Snyder, E. S. Benson, E. S. Edwards, D. Danern, W. H. Dougherty, W. J. Sloan, and B. Holmes. Alexander O. Holroyd, of the Hartford

**INTERNATIONAL AUTOMOBILE AND VEHICLE TIRE CO. (Milltown, New Jersey).—**The principal feature of this exhibit was the "International (Fox brand)" vehicle tire, made in G & J clincher pattern, which feature was adopted by the company for the first time last year. They exhibited also single tube and solid tires. Fountain pens were distributed as souvenirs.

REPRESENTATIVES.—James C. McElack, president; J. W. O'Mara, R. W. Trevelyan, H. S. DeSoto, J. A. Bruhn and F. A. Sahli, salesmen.

**MORGAN & WRIGHT (Chicago).—**This company, which last year for the first time exhibited motor tires of "Clincher" pattern, has now been licensed to manufacture the new Dunlop detachable tire, these two types forming the principal part of the company's exhibit. They still offer single tube tires, however. Prominence was given to a set of "clincher" tire tools, called the applying lever, removing lever, and wheel brace—certainly simple in construction and apparently practical and serviceable.

REPRESENTATIVES.—Charles J. Butler, president; Arthur Phelps, general sales manager; Charles Measure, manager automobile tire department; J. J. Alexander, Chicago manager; W. C. Marion, New York manager; Joseph C. Weston, Detroit; E. M. Greene, Cleveland; G. S. Shugart and H. E. Borland, New York; G. E. Sewald, southern representative.

**PENNSYLVANIA RUBBER CO. (Jeannette, Pa.).—**First appearance at the automobile shows; exhibited the "Pennsylvania Clincher" motor tire, "Pennsylvania" seamless motor tire inner tubes with lapped ends, and handsome special motor car mats in colors. In the way of a non skidding device, this company offers their standard tire with the tread inlaid with three rows of plugs or disks, made of a special compound of rubber and non slipping ingredients. The material in these disks is understood to have been used with success in rubber heels made by the company. The flooring of the space occupied by this company was covered with interlocking rubber tiling, of which they have become extensive makers. As a souvenir the company distributed some excellent rubber combination flesh and complexion brushes.

REPRESENTATIVES.—Herbert Du Puy, president; H. W. Du Puy, treasurer; Frank A. Wilcox, general manager; Wilmer Dunbar, superintendent; Frank P. Hayes, manager New York branch; A. G. Clark, Boston manager; F. W. Walters, factory selling representative.

**THE SWINEHART CLINCHER TIRE AND RUBBER CO. (Akron, Ohio).—**The tire shown in this exhibit is a solid rubber tire, fitted to a "Clincher" rim, and further held in place by means of cross wires, the ends of which are engaged by the converging flanges of the rim. Besides the tire as originally made, the exhibit included the new model, with concave sides, illustrated in THE INDIA RUBBER WORLD of December 1. The company have not yet undertaken to make their own tires.

REPRESENTATIVES.—James A. Swinehart, president; J. W. Rock, general representative.

**THE CONTINENTAL CAOUTCHOUC CO. (Hanover, Germany, and New York).—**The "Continental" tires, in metrical and American sizes. This was the only exhibit of foreign made tires in the show. There was also exhibited an excellent tire repair outfit for automobilists, retailing at \$27.

REPRESENTATIVES.—Emil Grossman, general manager; Harry Hartley, William E. Johns, and J. S. Smith, traveling representatives; Herr Richter, of Germany.

**DR. J. T. COOPER (Paterson, New Jersey) exhibited his "Fear naught" non-puncturable and non-collapsible automobile tire, which has been illustrated in this Journal, and expressed him-**

self greatly encouraged by the attention which it attracted from automobilists and tire men throughout the show.

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MOTORCYCLES did not figure largely. Not more than a score were to be seen. Five of these were exhibited by the Pope Manufacturing Co., in a suitable position, while of the remaining machines each was shown by a different maker, and practically out of sight, most of them in the balcony. It is true that this was a show of automobiles, and not bicycles, but the motorcycle makers who were represented were among the leaders in their trade, besides comprising almost the whole list. These figures seem particularly small compared with the 247 motorcycles at the Paris automobile show, in December, and 240 at the Stanley show, in London, which, while avowedly a cycle show, yields more and more to the pressure for the admission of automobiles. Prices of the motorcycles at the Garden ranged from \$200 to \$300. The tires were mostly the G & J detachable, 2 to 2½ inches, and understood to be principally from one factory. No tires specially adapted for use on motorcycles were shown in the rubber exhibits.

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A SUCCESSFUL rubber manufacturer who has given much study to the cause and effect of high prices in crude materials, recently said: "When the bicycle business was at its height I looked into the whole subject and made up my mind that in a very short time it would drop down to a normal demand. In other words, that the fad part of it would disappear. Now in a measure the automobile industry is an exaggerated bicycle business. I do not believe that the horse is going to disappear, nor do I believe that the automobile will continue to draw on the supply of crude rubber as it has. The presence of leather covered tires and a variety of non slipping devices that almost envelop the tire leads me to think that somebody will get up a resilient tire which is not made of plies of canvas welded together by expensive friction, and that the only rubber part of the automobile tire will be a good inner tube made, of course, of high grade rubber."

#### THE IMPORTERS' SHOW.

DURING the continuance of the show at Madison Square Garden another exhibition was in progress—the Importers' Automobile Salon, at Herald Square Hall, January 11-24. This is an extensive hall, covering the entire upper floor of Macy's large store at Thirty-fourth street and Broadway, and it was well filled with foreign makes of automobiles and accessories. Special efforts were made to attract the attendance of society as well as the public in general, and half a dozen ambassadors from European countries were named as "patrons" of the show. From all accounts, however, the interest in the exhibition was by no means comparable with that evinced for the Madison Square show, which may prove a comforting thought for American manufacturers of automobile tires, who naturally will be interested in the growth of the American motor industry.

The Michelin tires were prominently exhibited at the Importers' show, and were not exhibited at Madison Square Garden. The "Continental" tires were also exhibited, and the "Samson" and "Republic" and other non-skidding devices.

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OTHER SHOWS.—The Chicago National automobile show will open in the Coliseum on Saturday evening, February 4, and continue until the following Saturday evening. To a very large extent the exhibits made at Madison Square Garden, including the principal tire displays, will be duplicated there. This is the fourth great annual automobile show at Chicago.

The usual number of smaller automobile shows—though each

is of local importance—will be held this season. The first to follow the New York show was that in Philadelphia, given by the Automobile Dealers' Association of that city, January 23-28. It was largely attended, with a large number of exhibits, including tire displays by The Hartford Rubber Works Co., The B. F. Goodrich Co., The Diamond Rubber Co., The Fisk Rubber Co., and the Firestone Tire and Rubber Co.

Other shows have been scheduled as follows: Detroit, February 13-18; Cleveland, February 20-25; Buffalo, March 6-11; Boston, March 13-18 (with an "Importers' Show" on the same dates); Washington, D. C., March 27 to April. The National Association of (American) Automobile Manufacturers has announced a show for Toronto, Canada, during the last days of February, but these dates have been cancelled.

### LITERATURE OF INDIA-RUBBER.

THE CULTIVATION AND PREPARATION OF PARA RUBBER. BY W. H. JOHNSON, F.L.S., F.R.H.S., Director of Agriculture, Gold Coast Colony, West Africa. LONDON: GEORGE ALLEN & UNWIN, LTD., 1904. Pp. 124. Price, 6s. 6d.

THE author of this treatise was commissioned by his government in 1902 to visit Ceylon, to study the methods employed there in the cultivation and preparation of Pará rubber and other agricultural staples for market, with a view to their introduction into West Africa. Owing to the gradual extinction of native rubber species in Africa, Mr. Johnson considers the question of replanting with Pará rubber trees as well worth the consideration of the authorities, and he is convinced that there is in tropical Africa much land suitable for the cultivation of *Hevea*. Beginning with a general account of the growth of demand for rubber, and of the "Pará rubber tree" at home and abroad, he notes the methods which have been successful in the Far East in propagating and caring for this tree, and in the preparation of rubber from the latex, together with some estimates on the cost of rubber culture in Ceylon and the Malay states. The book closes with a chapter on the commercial value of the oil in *Hevea* seeds.

REPORTS ON RUBBER IN THE GOLD COAST AND SIERRA LEONE. BY C. W. SMYTHE, M. A., F.R.S., Director of the Botanical Station, Sierra Leone. LONDON: GEORGE ALLEN & UNWIN, LTD., 1904. Pp. 124. Price, 6s. 6d.

THIS report deals with the causes of decrease in the quantity of rubber exported from British West Africa, and with the efforts made thus far in replanting. In 1898 Great Britain imported from all her West African colonies 94,301 hundred-weight of rubber, the amount decreasing annually until it reached only 18,486 cwt. in 1902. The concluding words of the pamphlet before us are: "The Sierra Leone rubber industry is nearly dead, and, unless it is taken up in earnest by enterprising Europeans, it is unlikely ever to be revived." It appears that efforts to interest the native chiefs in rubber culture have been entirely unavailing. The report on the Gold Coast is made by Mr. W. H. Johnson, F.L.S., whose recent book is reviewed above, and that on Sierra Leone by Mr. C. W. Smythe, curator of the botanical stations. Mr. Johnson regards *Hevea brasiliensis* (Pará rubber) as the most satisfactory rubber tree to cultivate in West Africa, next to which he places the native *Funtumia elastica*. *Castilloa* has not succeeded, and he is not favorably impressed with the rubber of Ceará. Rubber planting experiments in Sierra Leone have not progressed so far as in the Gold Coast, and Mr. Smythe is less definite in his conclusions.

BIJDRAGE tot de geschiedenis der Getah-pertja-cultuur op Java. (Contributions to the history of Gutta-percha culture in Java.) By Dr. W. BURCK. A very thorough resume, with references to authorities.] Amsterdam: N. N. V. 1904. Pp. 881-882.



## AMERICAN CONSUMPTION OF INDIA-RUBBER IN 1904.

**T**WELVE months ago it was stated in these columns that "the past year was an exceptional one in the rubber industry," as indicated, among other reasons, by larger imports of crude rubber than in any preceding year. As will appear from the table at the bottom of this page, the American imports of rubber during 1904 exceeded by more than 2800 tons the largest figures for any previous year, being just 90 per cent. greater than the imports 10 years ago. Not only were the receipts thus exceptionally large but the deliveries for consumption were correspondingly great. On December 31 the stocks here were, according to this table, 305 tons of rubber of all kinds, whereas the average stocks for 10 years previous had been 785 tons, and at times had been very much greater. The item of "deliveries to manufacturers" cannot be held, however, to have represented during the past year as closely as usual the exact consumption, in view of the policy of certain large consuming interests, recorded in these pages during the past year, of buying largely in advance of current needs, in order to render themselves independent of fluctuations in prices. In view of this condition deliveries doubtless have been made to manufacturers in excess of actual consumption, but without doubt the requirements of the industry have been very great, in spite of the fact that prices have ruled higher during the year than in any former twelve months.

Comparative statement of prices of fine Pará rubber in New York and Liverpool, for several years past :

YEARS.	New York.	Liverpool.
1895 .....	82 @ 1.06	3. 7½ @ 4. 5
1899 .....	91 @ 1.10	3. 10 @ 4. 7½
1900 .....	83 @ 1.11½	3. 8½ @ 4. 9
1901 .....	76 @ .95	3. 4 @ 3. 11½
1902 .....	67 @ .92	2. 10 @ 3. 9½
1903 .....	76 @ 1.13	3. 6½ @ 4. 8
1904 .....	84 @ 1.32	3. 10½ @ 5. 6

The next table analyzes the imports of crude rubber into the United States by grades, the figures denoting tons :

YEARS.	Para.	Para.	Gen. trals.	African and E. I.	Total.
1895 .....	6,804	2,935	3,003	5,878	18,620
1899 .....	8,622	3,876	3,440	7,157	23,095
1900 .....	8,079	3,906	3,020	5,463	20,468
1901 .....	9,394	3,838	2,927	7,139	23,208
1902 .....	8,666	4,235	2,588	6,353	21,842
1903 .....	7,325	4,604	3,040	7,786	24,760
1904 .....	9,527	4,541	4,052	9,204	27,623

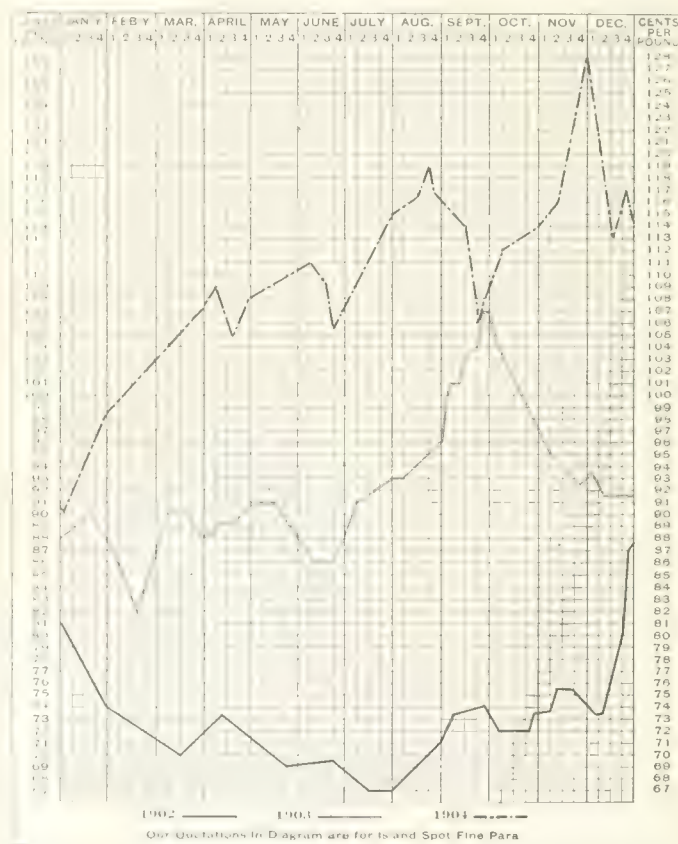
[\* Including Caucho and Pernambuco.]

The figures in the next column, showing the extent of the world's visible supplies of rubber on January 1, 1905, have been derived from the Messrs. Morse's tables, though they are given on this page in pounds instead of tons :

Stocks in the United States.....	Pounds	683,200
Para grades .....	1,320	
Central American and Caucho .....	1,480	
African and East Indian .....	49,520	
Stocks in Europe.....		5,868,800
Para grades .....	425,400	
All other .....	5,439,360	
Stocks Para grades at Para and all other .....		5,268,480
Total.....		11,820,480
Total, January 1, 1904.....		11,241,200
Total, January 1, 1903.....		12,221,440
Total, January 1, 1902.....		13,027,160
Total, January 1, 1901.....		15,017,400
Total, January 1, 1900.....		19,251,400

## RUBBER PRICES FOR THREE YEARS.

DIAGRAM (copyrighted, 1904, by Henry A. Gould) indicating spot prices at New York of Islands fine Pará rubber. The top-most line relates to prices in 1904, the middle of line 1903, and the lowest line in 1902.



## CONSUMPTION OF INDIA-RUBBER BY THE UNITED STATES AND CANADA (IN TONS).

[From the Annual Statistical Summary of ALBERT T. MORSE & Co., brokers, New York.]

	1895	1896	1897	1898	1899	1900	1901	1902	1903	1904	1905
Imports to United States.....	14,293	16,152	15,347	16,426	14,643	16,182	14,333	17,071	18,620	23,095	20,468
Exports to Europe.....	231	1,082	491	714	391	324	500	250	150	300	450
Net Imports .....	14,062	15,070	14,856	15,712	14,252	15,858	13,833	16,821	18,470	22,795	20,018
Add Stock January 1.....	740	1,260	1,086	1,217	1,037	1,420	558	641	744	591	712
Aggregating .....	14,802	16,330	15,942	16,929	15,289	17,278	14,391	17,462	19,214	23,386	20,730
Less Stock end of year.....	1,260	1,086	1,217	1,037	1,420	558	641	744	591	712	1,198
Deliveries to Manufacturers.....	13,542	15,244	14,725	15,892	13,869	16,720	13,750	16,718	18,623	22,674	19,532

## RECENT RUBBER STATISTICS.

## RUBBER PRODUCTION OF BRITISH INDIA.

THE subjoined figures relate to the exports of raw rubber, for 35 years past, from British India. The greater part of this rubber came formerly from Assam, but now Assam has almost ceased to yield any rubber, and the exports are afforded mainly by Burma, which was not known, at the beginning of the period covered by this table, to contain rubber. The Burma output also has dwindled to almost nothing, as foreshadowed in an article on the "Decline in the Rubber Yield of Burma," in THE INDIA RUBBER WORLD, December 1, 1898 (page 59). The fiscal year in British India ends March 31. In the yearly official figures the rubber exports are stated in hundredweights, which for the present use have been converted into pounds:

## EXPORTS OF INDIA-RUBBER FOR THIRTY-FIVE YEARS.

Pounds.	Pounds.	Pounds.
1869-70 ... 737,408	1881-82....1,198,288	1893-94....1,076,992
1870-71....1,008,672	1882-83....1,182,496	1894-95....1,038,240
1871-72 ... 1,751,456	1883-84....1,027,376	1895-96.... 801,248
1872-73... 2,415,952	1884-85.... 909,104	1896-97... 695,556
1873-74 ... 1,555,744	1885-86.... 733,936	1897-98.... 623,056
1874-75 ... 1,780,016	1886-87.... 850,976	1898-99.... 698,880
1875-76....1,708,896	1887-88....1,033,536	1899-00.... 914,928
1876-77 ... 1,490,496	1888-89.... 971,376	1900-01.... 862,176
1877-78 ... 1,544,928	1889-90....1,112,608	1901-02 ... 463,232
1878-79....1,124,256	1890-91....1,040,704	1902-03... 115,920
1879-80 ... 1,291,696	1891-92....1,045,408	1903-04... 200,704
1880-81... 1,097,712	1892-93....1,116,864	

## SMALLER EXPORTS FROM BOLIVIA.

FROM the *Boletín* of the national statistical office of Bolivia it appears that the exports of rubber from that country for the calendar year 1902 were smaller than for any year since 1897. A smaller output from the Acre district was to be expected, owing to the political troubles in that district during the greater part of the year, but the total from the other districts was also somewhat smaller. Since 1902 the Acre product has been credited to Brazil, instead of Bolivia. Meanwhile the exports from the remaining districts have increased slightly. The exports for three years past, by customs districts, may be thus compared:

	1901.	1902.	1903.
[Shipped via Manabos]			
El Acre .....	5,054,436	1,757,510	.....
[Via Madeira river]			
Villa Bella .....	1,749,205	1,512,731	1,495,221
[Via Pacific ports]			
I. a Paz .....	627,783	631,288	535,623
Pelechuco .....	.....	.....	102,465
Oruro .....	24,171	42,383	542,353
[Through Argentina]			
Puerto Suarez .....	167,543	238,577	229,796
Tarija .....	.....	4,096	2,816
Total .....	7,623,138	4,180,585	2,906,274
Excluding Acre.....	2,568,696	2,432,075	2,906,274

The yearly exports of rubber from Bolivia for thirteen years past have been as follows, omitting 1899, for which year no complete returns exist:

Pounds.	Pounds.	Pounds.
1890 ..... 646,800	1895.....1,804,992	1900.....7,691,728
1891.....759,000	1896.....2,509,566	1901.....7,623,138
1892.....791,450	1897.....3,683,275	1902.....1,186,585
1893.....808,600	1898.....6,943,100	1903.....2,906,274
1894.....1,391,500	1899.....	

It may be of interest to note the export value of Bolivian rubber. Taking the official figures for the past three years, stated in *bolivianos*, and reckoning the *boliviano* at 1 franc, the equivalent in United States money would be 23.17 cents per pound for 1901, 22.64 cents for 1902, and 19.77 cents in 1903. This, it is to be understood, is for fine rubber, for the most part, with some Caucho.

## BRITISH CENTRAL AFRICA PROTECTORATE.

RUBBER exports for the last three fiscal years (ending March 31) were as follows:

1901-02.....	14,373½ pounds, value, £ 102 18 7½
1902-03.....	11,723 pounds, value, £ 117 14 1½
1903-04.....	4,262 pounds, value, £ 42 7 6

Exports were by the river Shiré, a tributary of the Zambesi. The largest export is to Great Britain, the remainder going principally to Germany.

The African Lakes Co.'s steamers carried outward from the protectorate, via the Shiré, during 1902 (calendar year) 145,077

United Kingdom.....	60,000 pounds of rubber, the larger part of which was "in transit" from neighboring districts, principally Northern Rhodesia. The details of the "transit" rubber for the fiscal year
Germany.....	11,723
Port. East Africa.....	4,262
Total.....	76,985
Total, 1901-02.....	12,498 4 8

1903-04, as to values and destination, are given in the marginal table.

## SOUTHERN NIGERIA.

[From the Annual Colonial Reports.]

## EXPORTS OF INDIA-RUBBER.

	Value.	Pounds.
Year ending March 31, 1898.....	£ 32,959	
Year ending March 31, 1899.....	60,607	874,298
Year ending March 31, 1900.....	105,116	1,450,567

[Under New Fiscal System.]

	Value.	Pounds.
Year ending Dec. 31, 1900.....	137,289	
Year ending Dec. 31, 1901.....	106,925	1,740,156
Year ending Dec. 31, 1902.....	46,946	865,834
Year ending Dec. 31, 1903.....	61,816	1,177,803

## PORTUGUESE EAST AFRICA.

[From British Consular Reports.]

## EXPORTS OF INDIA-RUBBER FROM PEIRA.

YEARS.	Pounds.	Value.
1900.....	76,160	£ 5,333
1901.....	186,664	13,050
1902.....	130,175	12,186
1903.....	.....	13,633

## EXPORTS OF INDIA-RUBBER FROM LOURENÇO MARQUES.

Pounds (in 1903).....	10,463
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## EXPORTS OF INDIA-RUBBER FROM MOZAMBIQUE.

GRADE.	1902.	1903.
Pure—extracted by incision.....kilos	.....	100
Impure—incision.....	100,522	4,257
Impure—"cooked".....	2,592	343,330
Total.....kilos	103,114	347,687
Value.....	£12,058	£35,297

## MADAGASCAR.

[From a British Consular Report.]

## VALUE OF EXPORTS OF INDIA-RUBBER.

1901.	1902.	1903.
£88,526	£76,272	£26,699
	£21,825	£103,258

## BRITISH HONDURAS.

[From the Annual Colonial Report for 1903.]

## EXPORTS OF INDIA-RUBBER FOR NINE YEARS.

Pounds.	Pounds.	Pounds.
1895.....17,351	1898.....37,022	1901.....40,044
1896.....19,895	1899.....55,321	1902.....39,338
1897.....13,797	1900.....48,996	1903.....22,176

## Summary of Exports for 1903.

To the United States.....	pounds 20,664
To Great Britain.....	1,512 22,176

THE London *India-Rubber Journal* has issued its fifth annual "Diary and Year Book," containing pages for memoranda for each business day during 1905, together with a printed section containing much trade and statistical data of use to the rubber branch of Great Britain, conveniently arranged for reference. The yearly editions of this work have shown continuous improvement, and the publishers express their pleasure at the steady growth in the appreciation shown by their patrons.



## RETURN OF THE YACHT "VIRGINIA."

THE steam yacht *Virginia*, the departure of which from New York, on November 15, for a cruise in southern waters, was reported in the December 1 issue of this Journal, arrived in New York on the morning of January 30, after having satisfactorily carried out the program arranged by Commodore Benedict for his guests. The *Virginia's* first stop, on the outgoing trip, was at Hamilton, in the Bermudas, after which stops were made at Martinique and at Barbados, whence the yacht proceeded directly to the Amazon. The passengers reached Pará on Sunday morning, December 4. After a short stay in the great rubber capital, and a pleasant exchange of civilities between the Benedict party and the officials and leading citizens, the yacht steamed up to Manáos, a distance of nearly 1000 miles. Here also many courtesies were shown to the North Americans, and by December 23 the party were again in Pará. After another stay of a few days the yacht left for the north, reaching Trinidad on January 9, La Guayra on the 11th, Curacao on the 14th, and Havana on the 21st. One more stop was made, at Nassau, before the arrival at New York.

THE "VIRGINIA" AT MANAOS AND THE RETURN TO PARA.

[TRANSLATED FROM "JORNAL DO COMERCIO" (PARA), DECEMBER 24.]

THE North American yacht *Virginia* being bound on a pleasure trip and having a number of millionaires and politicians on board, arrived at our port yesterday morning at 8.30 A. M. As we have had occasion to announce before this, the *Virginia* arrived on the 12th inst. at Manáos, where Mr. Benedict and his traveling companions were very cordially received.

A great number of visits were paid to the *Virginia* during the 10 days it remained at anchor in Rio Negro bay. As we have stated before, the governor of the state gave an entertainment in honor of the passengers. On the 20th a regatta was held on the Rio Negro in honor of our guests, Commodore Benedict acting as judge of the contests. Among other excursions, the visitors made several fishing trips to the rivers in the vicinity of Manáos. On Monday, before sailing, the commodore gave a sumptuous breakfast aboard his yacht, the governor and other persons of high rank being present.

At the time of the arrival of the *Virginia*, the custom house officers at Manáos boarded the vessel for the purpose of making an inspection, and left a permanent guard on board. The commodore, on seeing his vessel subjected to such strict measures, communicated the facts to the American consul, who had an interview with the custom house inspector, explaining to him the nature of the journey on which the yacht was bound. Having learned the facts in the case, the inspector decided to remove his guard.

While on its way to Belem, the yacht touched at Santarem, where all the passengers landed and took a long walk. They likewise stopped at the place called "Cacaul Grande," and, on the day before yesterday, at Breves, where they made a short stay in order to inspect the work which is being done there for the installation of the wireless telegraph service. The yacht left Breves at 3.30 P. M.

On the trip from Belem [Pará] to Manáos many photographs were taken. At the mouth of the Solimões, several persons engaged in the turtle fishery were photographed. All the passengers on the *Virginia* seemed to be enchanted by the beauty of our rivers, speaking in the highest terms of everything they had seen.

On the second day after his arrival at Manáos, Mr. Cornelius Benedict asked for an audience with the governor, and was received at 2 o'clock in the afternoon. Mr. Benedict, accompanied by Messrs. E. M. Backus and Dr. Porphirio Nogueira,

had a pleasant chat with the governor of the state of Amazonas. On this occasion, the governor invited Mr. Benedict and his companions to an excursion on the river, which was enthusiastically accepted by the North American travelers.

Mr. Benedict, having learned that Ex-Governor Dr. Sylvio Nery was expected to arrive at Manáos, on his return from Europe, placed the *Virginia* at the disposal of Dr. Constantino Nery, to receive the distinguished Amazonense on board the packet. A banquet, given by Dr. Porphirio Nogueira in honor of Mr. Cornelius Benedict and his traveling companions, was held in the rooms of the Club Internacional, the governor and vice governor of the state, as well as the ranking civil and military authorities, being present. The toast of honor, proposed by Dr. Constantino Nery, was drunk to the prosperity of the American giant.

## BELTING STILL INDISPENSABLE.

AT the annual meeting of the Leather Belting Manufacturers' Association (New York, November 16), a paper on "Present Tendencies Toward Direct Driving by Electric Motors" was read by Mr. Charles Robbins. He reviewed the progress of the use of electric power in the industries and analyzed the increased efficiency attainable under certain conditions by direct driving, and dispensing with belts entirely. But there yet remain classes of work where the belt seems indispensable. In textile mills, for instance, it has been found that the best practice is to subdivide the shafting into reasonable units and drive each by a motor through a single belt. Without attempting to summarize the whole paper, it may be said that its conclusion is very fully set forth in a single paragraph: "Without having extra data, we think the sale of belted motors will probably bear the ratio 5:1 as compared with direct connected, and as there were in the neighborhood of some 55,000 electric motors sold in 1903 there is still considerable field for the belt for a long time to come. This conclusion is of interest to the manufacturers of rubber belting, no less than to those of leather.

## SOME WANTS OF THE RUBBER TRADE.

[305] WE have an inquiry for "names of firms manufacturing automatic scrap rubber grading machines." This has already been submitted to an important firm in the rubber reclaiming business, who report: "We do not know of any manufacturers making such machines, nor do we believe that human ingenuity can devise a machine for such a purpose."

[306] A correspondent writes: "Can you give me any information as to the best place to send a young man to take a course in chemistry relative to the manufacture of mechanical rubber goods."

[307] A correspondent at McKees Rocks, Pennsylvania, writes: "Please inform me where I can get short elastic nipples for bottles."

[308] A correspondent of Grand Rapids, Michigan, writes: "As we are in the market for a good rubber dice box we take the liberty to write to ask if you can inform us where we can get some."

## ANSWERS.

[299] Messrs. John Royle & Sons (Paterson, New Jersey) offer to supply machinery for weaving or knitting fabric for hose or belting, such as asked for.

[302] The white rubber razor wiping device is made by La Favorite Rubber Manufacturing Co. (Paterson, New Jersey), for the inventor.

## NEWS OF THE AMERICAN RUBBER TRADE.

## ATLANTIC RUBBER SHOE CO.

THE directors chosen at the recent annual meeting of the Atlantic Rubber Shoe Co. held a meeting at the offices of the company, No. 52 William street, New York, on the afternoon of January 10, and elected officers for the ensuing year. The list of officers and directors follows:

*President*—JOHN H. FLAGLER.  
*Vice President*—G. TROWBRIDGE HOLLISTER.  
*Secretary and Treasurer*—C. E. SLENCER.  
*Directors*—John R. Hegeman, Latham A. Fish, G. Trowbridge Hollister, Thomas B. Hidden, Edward H. Litchfield, John H. Flagler, Frank N. White, Joseph O. Stokes, William A. Read.

## UNITED STATES RUBBER CO.—DIVIDEND.

THE board of directors at a meeting on January 5 declared a dividend of  $1\frac{1}{2}$  per cent. on the preferred stock of the company, from the net earnings for the fiscal year beginning April 1 last, to stockholders of record on February 28, payable March 15. This is the third dividend of  $1\frac{1}{2}$  per cent. for the fiscal year, the previous disbursements having been made on June 15 and December 15, respectively, and the fourth declared since the resumption of dividends. The forthcoming dividend will require \$352,882.50. A statement has emanated from the offices of the company that the net earnings for the first three-quarters of the fiscal year (December partially estimated) leave a surplus, after paying the three dividends, of \$2,079,580.

## EUREKA FIRE HOSE CO. IN THE NORTHWEST.

MR. MAURICE E. BAIRD will represent the Eureka Fire Hose Co. (New York) exclusively in the sale of their standard brands of fire hose to fire departments in Iowa, northern Wisconsin, Minnesota, North Dakota, South Dakota, and Montana. Mr. Baird has been connected with the Eureka company for some years, representing them at Chicago together with his brother, Mr. Clay Baird. His new headquarters will be at Minneapolis, Minnesota, where it is expected that he will achieve the same success in the larger territory now in his charge that marked his work in the Chicago headquarters.

## A CHARTER SURRENDERED.

AT a meeting of shareholders of The India Rubber Co. (an Ohio corporation) at Akron, on December 28, a resolution was adopted to surrender the charter. The company was organized in 1895, with \$100,000 capital, and established a factory at Akron, which was devoted mainly to making vehicle tires. In 1899 control was acquired by the Rubber Goods Manufacturing Co., formed in that year, and after the destruction of the factory by fire, in March, 1903, the business was transferred to New Brunswick, New Jersey, where the Rubber Goods company owned a factory not then in use. A new corporation by the name of The India Rubber Co., with \$500,000 capital, was formed under the New Jersey law July 1, 1903.

## BISHOP GUTTA-PERCHA CO. (NEW YORK).

AT the annual meeting of the shareholders of this company, held on January 11 the following were elected directors for the ensuing year: Amos A. Browning, Norwich, Conn.; Ellen I. Anderson, Rochester, N. Y.; Henry A. Reed, Newark, N. J.; Harry D. Reed, New York city; and W. Boardman Reed, Mount Vernon, N. Y. The usual semi-annual dividend of 5 per cent. on the capital stock was declared. The directors elected for president and treasurer, Mr. Henry A. Reed; for

vice president, Mr. W. Boardman Reed; and for secretary, Mr. Louis F. Reed. There had been a vacancy in the board since the death of the president, H. E. Blitz, in October last. This was filled by the election of Harry D. Reed, the works superintendent; the other members of the board were reelected. Mr. Henry A. Reed, who becomes president, had been for a number of years secretary and treasurer. Within the last 15 months the Bishop Gutta Percha Co. have built in connection with their factory a new four story building, 25 X 40 feet, for storage purposes, in order to be able to devote the whole of the factory building to manufacturing. They are just now completing a fourth story, 75 X 90 feet, to the old three story factory. This addition is to be used entirely for manufacturing Gutta-percha and Balata tissue, much of which is of high grade used for surgical purposes and for dress shields. The company state that it is not many years since nearly all of the Gutta-percha tissue used in the United States except the very highest grade was imported, while at present nearly all is domestic manufacture.

## THE OHIO RUBBER CO.

THE Cincinnati store of the Ohio Rubber Co. (Nos. 612-614 Race street) has been in existence for 12 years, under the management of Mr. H. B. Hallock. Each year has seen an enlargement of the business and of the premises, until now a seven story building is occupied. The first floor is devoted to a stock of retail goods for household use—including druggists' sundries—and the second floor to waterproof clothing. The other five floors and the basement are used for stocks of mechanical goods. Until two years ago the house catered to the jobbing and wholesale trades exclusively, but now a first class retail department is included.

## FINAL SETTLEMENT OF THE STREAT CLAIMS.

WHAT is understood to be a final settlement of the claims of George Streat, for alleged infringement of his waterproof fabric patent (No. 260,063—June 27, 1882), was made in the latter part of December. The claims of the Streat patent were as follows:

1. As a new article of manufacture, a waterproof material composed of two cloths, united by waterproof cement filling the depressions or hollows between them, and having the projecting portions of their contiguous faces in contact, whereby the compound material is rendered waterproof without essentially increasing the thickness, substantially as described.
2. As a new article of manufacture, a sewed garment composed of waterproof material formed of two cloths having the projected parts of their contiguous faces substantially in contact and the depressions filled with waterproof cement, substantially as described.

In a statement made in the offices of THE INDIA RUBBER WORLD in September, 1899, Mr. Streat claimed that the manufacture of mackintoshes in America dated from the licensing of a certain rubber firm to work under his patents. Other firms adopted his ideas without the formality of a license, until the practice introduced by him had become universal. He therefore brought suits against the various mackintosh manufacturers to secure an accounting. His patent expired on June 27, 1899, but that did not estop him from prosecuting his cases to a final trial. The matter appears, however, to have ended in a compromise. The association of mackintosh manufacturers formed in May, 1899, though not active for some time



past, still had some cash in the treasury, and it is understood that Mr. Streat has accepted \$900 from this source, in settlement of his claims against the 22 members of the association.

The statement referred to above as having been made to THE INDIA RUBBER WORLD by Mr. Streat, in explanation of what he was suing for, was never published, for the reason that, after it had been committed to writing, Mr. Streat desired to be paid \$50 for supplying information of so much interest to the trade, and the price seemed rather high.

#### POPE MANUFACTURING CO.

THE Pope Manufacturing Co. (New York), successors to the late American Bicycle Co. and the companies subsidiary to the latter, have made public their balance sheet for the first fiscal year, ending July 31, 1904. The general profit and loss account is as follows:

Gross sales and earnings	\$7,226,584.07
Less manufacturing and producing costs and operating expenses	5,995,793.61
	\$1,230,799.06
Other income:	
Miscellaneous manufacturing and operating gains and losses	\$ 6,507.15
Interest and discounts received	55,650.95
	62,158.10
Total Income	\$1,292,954.16
General expenses:	
Administrative, selling and general expenses	\$1,147,895.41
Commercial discounts and interest	94,066.06
	\$1,241,961.47
Balance—Net Earnings	\$50,992.69

The Pope company are capitalized at \$22,500,000. The cost of properties is put down at \$18,523,632.55, and the expenditures on additions and betterments during the year—less sales of old machinery—at \$392,270.92. Stocks of finished and partly finished products, and materials and supplies, figure at \$3,111,398.34; accounts receivable and cash at \$1,126,157.85; and accounts payable at \$310,054.94.

#### REPORTED SALES OF SHARES—1904.

Issue	Shares sold	High	Low	Last
First Preferred	11,972	70 <sup>3</sup> / <sub>4</sub>	74 <sup>1</sup> / <sub>2</sub>	74 <sup>1</sup> / <sub>2</sub>
Second Preferred	2,520	28	16 <sup>1</sup> / <sub>2</sub>	16 <sup>1</sup> / <sub>2</sub>
Common	2,100	7 <sup>1</sup> / <sub>4</sub>	4 <sup>1</sup> / <sub>2</sub>	6 <sup>1</sup> / <sub>4</sub>

#### AGENCIES OF THE MERCHANTS RUBBER CO., LIMITED.

THE extensive shoe jobbing house of Thomas Ryan & Co., of Winnipeg, Manitoba, have been appointed exclusive agents for the products of the Merchants Rubber Co., Limited (Berlin Ontario) for western Canada—namely, Manitoba and the Territories. This is an old reliable company, which has made a steady growth in keeping with the progress of the region referred to, and continues one of the most progressive houses in the Dominion. Messrs. Ryan & Co. are understood to be about to erect a large warehouse at Winnipeg to accommodate their growing business, and they give employment to an extensive staff of representatives on the road. The Merchants Rubber Co., Limited, the newest of the rubber manufacturing companies in the Dominion, had already appointed agents and planned to carry stocks in London, Toronto, and Ottawa (Ontario), Montreal (Quebec), and Fredericton (New Brunswick). They are dealing with the retail trade and report that thus far they have found this method very satisfactory.

#### WEST COAST RUBBER CO. IN BANKRUPTCY.

[See THE INDIA RUBBER WORLD, January 1, page 132.]

THE application of Don A. Sutherland, assignee, before the superior court in San Francisco, on January 4, for permission to sell the assets of the company in parcels at private sale did not meet with Judge Troutt's approbation. Counsel for George

Fredericks, former president of the company, and its heaviest creditor, opposed the application. The court advised the attorneys for each side to get together and agree upon an order of sale to be submitted to the court.

#### DETROIT TO HAVE A RUBBER FACTORY.

A VISIT to Detroit, Michigan, was made recently by Mr. Charles H. Dale, president of the Rubber Goods Manufacturing Co., on his return from which he informed THE INDIA RUBBER WORLD that it had been decided by his company to establish a rubber factory in that city. He stated: "I do not know when work on the new factory will be begun—whether very soon or a year hence—but the location has been decided upon and the land paid for." To citizens of Detroit Mr. Dale expressed great confidence in the continued growth in importance of Duluth as a commercial and industrial center, and he thought highly of the advantages which the city possessed as a manufacturing site. Detroit has long been an important distributing center for rubber goods, and one of the directors of the Rubber Goods Manufacturing Co. resides there—Mr. Frank W. Eddy, head of the important house of H. D. Edwards & Co., jobbers of mechanical rubbers. Another inducement for the location of a rubber factory at Detroit is the prominence which that city has attained in the production of automobiles, which is now larger than in any other American city. During the past year 17 factories in Detroit, employing 6000 work people, turned out 9000 automobiles, or fully one-third of the total estimated production of the United States. Estimates have been made of the 1905 production, as high as 12,000 machines, very many of which will be high priced. The automobile industry has also become important in the state of Michigan outside of Detroit, there being altogether 30 factories in the state.

#### THE CANADIAN RUBBER CO.'S CONVENTION.

A UNIQUE convention was that held on January 2-9 at the executive offices of the Canadian Rubber Co. of Montreal. This was a gathering of all the company's branch managers throughout the Dominion, for the purpose of discussing mutual interests, and undergoing a course of instruction at the hands of the company's manufacturing experts. Stenographic reports were prepared of each day's proceedings, and every participant in the discussions received a copy. One of the company's officials from the Pacific coast traveled over 5000 miles to be present, and many of the other "pilgrims" cheerfully overcame long distance obstacles. The convention was originated by Mr. D. Lorne McGibbon, the forceful general manager of the Canadian Rubber Co., and was a marked success in every way. At the conclusion of the convention all who participated were handsomely entertained by Mr. McGibbon at a dinner and theater party.

#### LEATHER BELTING PRICES ADVANCED.

AT a special meeting of the Leather Belting Manufacturers' Association, held on January 18, at the Fifth Avenue Hotel, New York, it was unanimously resolved to advance the price of belting 15 per cent. above the list in force for some time past. An advance in leather belting was foreshadowed in the report of the annual meeting of the association, in the issue of this Journal of December last (page 97).

#### A RUBBER FACTORY BURNED.

THE factory of the Elliott Manufacturing Co. (Menlo Park, New Jersey) was destroyed by fire early on Sunday morning, January 15. Mr. C. B. Elliott, president of the company, informs THE INDIA RUBBER WORLD that his loss was \$35,000, upon which there was no insurance. A portion of the machinery is still available for use, and Mr. Elliott hopes to resume work on the same premises within a month, at least on a small

scale, and gradually rebuild the plant. The work done here has been washing rubber for the trade and making golf balls and dress shields.

#### NEW YORK STOCK EXCHANGE TRANSACTIONS.

##### UNITED STATES Rubber Co.:

DATES.	COMMON.			PREFERRED.		
	Sales.	High.	Low.	Sales.	High.	Low.
Week ending Dec. 23	1,300	32 <sup>3</sup> / <sub>4</sub>	32 <sup>1</sup> / <sub>4</sub>	3,500	94 <sup>1</sup> / <sub>2</sub>	93
Week ending Dec. 31	10,100	31 <sup>1</sup> / <sub>2</sub>	32 <sup>3</sup> / <sub>8</sub>	9,150	100	94 <sup>1</sup> / <sub>2</sub>
Week ending Jan. 7	14,200	33 <sup>3</sup> / <sub>4</sub>	33 <sup>1</sup> / <sub>4</sub>	3,700	99 <sup>3</sup> / <sub>4</sub>	98 <sup>3</sup> / <sub>8</sub>
Week ending Jan. 14	22,750	38 <sup>1</sup> / <sub>4</sub>	35	8,500	101 <sup>1</sup> / <sub>4</sub>	99 <sup>1</sup> / <sub>4</sub>
Week ending Jan. 21	8,100	38	36	3,860	100 <sup>7</sup> / <sub>8</sub>	100

#### PREFERRED STOCK, \$23,525,500.

Last Dividend, December 15, 1904, 1<sup>1</sup>/<sub>2</sub>%.

	1900.	1901.	1902.	1903.	1904.
Shares sold.....	90,924	132,275	104,202	62,343	182,443
Highest price.....	104 <sup>1</sup> / <sub>4</sub>	85	64	58	100
Lowest price.....	77 <sup>1</sup> / <sub>4</sub>	47	49 <sup>1</sup> / <sub>2</sub>	30 <sup>1</sup> / <sub>4</sub>	41

#### COMMON STOCK, \$23,666,000.

Last Dividend, April 1, 1905, 1<sup>1</sup>/<sub>2</sub>%.

	1900.	1901.	1902.	1903.	1904.
Shares sold.....	502,377	318,038	53,356	80,890	285,819
Highest price.....	44	34	19 <sup>1</sup> / <sub>8</sub>	19 <sup>1</sup> / <sub>8</sub>	34 <sup>1</sup> / <sub>2</sub>
Lowest price.....	21	12 <sup>1</sup> / <sub>2</sub>	14	7	10 <sup>1</sup> / <sub>2</sub>

##### RUBBER Goods Manufacturing Co.:

DATES.	COMMON.			PREFERRED.		
	Sales.	High.	Low.	Sales.	High.	Low.
Week ending Dec. 23	2,350	27	26	500	94	93 <sup>1</sup> / <sub>2</sub>
Week ending Dec. 31	5,900	28	26 <sup>1</sup> / <sub>4</sub>	400	95	94
Week ending Jan. 7	2,250	27 <sup>1</sup> / <sub>4</sub>	26 <sup>1</sup> / <sub>4</sub>	300	95 <sup>1</sup> / <sub>2</sub>	95
Week ending Jan. 14	11,900	28 <sup>1</sup> / <sub>4</sub>	26 <sup>1</sup> / <sub>2</sub>	1,170	95 <sup>1</sup> / <sub>2</sub>	95
Week ending Jan. 21	2,900	27 <sup>7</sup> / <sub>8</sub>	26 <sup>3</sup> / <sub>4</sub>	100	95 <sup>1</sup> / <sub>2</sub>	95 <sup>1</sup> / <sub>2</sub>

#### PREFERRED STOCK, \$8,051,400.

Last Dividend, December 15, 1904, 1<sup>1</sup>/<sub>2</sub>%.

	1901.	1902.	1903.	1904.
Shares sold.....	18,541	39,582	55,280	25,804
Highest price.....	90	74	64 <sup>1</sup> / <sub>2</sub>	93
Lowest price.....	65	63	60	74 <sup>3</sup> / <sub>8</sub>

#### COMMON STOCK, \$16,941,700.

Last Dividend, July 15, 1904, 1<sup>1</sup>/<sub>2</sub>%.

	1901.	1902.	1903.	1904.
Shares sold.....	172,031	339,805	276,759	369,347
Highest price.....	38 <sup>1</sup> / <sub>4</sub>	25 <sup>3</sup> / <sub>8</sub>	30	29 <sup>7</sup> / <sub>8</sub>
Lowest price.....	18	17 <sup>1</sup> / <sub>4</sub>	12	14 <sup>3</sup> / <sub>4</sub>

#### TROUBLES OF THE CHICAGO RUBBER WORKERS' UNION.

THE courts have been called upon to settle the affairs of the Chicago rubber workers' union—Local No. 1 of the Amalgamated Rubber Workers' Union of America—for the assets of which a receiver has been appointed. After the failure of the strikes in which the union was involved last year the membership rapidly declined from about 1400 to almost nothing. The charter provides for the disbanding of the organization when the membership no longer exceeds nine, any funds to be divided among the members. There are alleged to be \$2500 belonging to the Chicago union, the possession of which apparently has led to a bitter fight among the few members remaining. Thomas Richards, the recording secretary, was arraigned on a charge of larceny as bailee of the union's records, and a warrant was sworn out for the arrest of William Velton, the treasurer, on a charge of embezzlement. The complainant is William Lawrence, representing the element in the union who want to prevent any disposition of the funds until the five members under indictment in the criminal court for assaulting non union men at the Morgan & Wright and

Mechanical Rubber Co. factories have had their trials. Meantime it is understood that efforts have been made to interest the rubber workers in Chicago in another union but the organizer has met with little encouragement. The experience of the workers with the old union has not tended to inspire enthusiasm in this direction and the employés of the various plants appear to be satisfied with their present treatment. Mr. T. S. Blanchard, of the Mechanical Rubber Co., said to THE INDIA RUBBER WORLD correspondent that so far as he had learned there had been no effort to organize a new union, and that the old union was entirely dead.

#### THE WESTERN SHOE JOBBERS' ANNUAL MEETING.

AT the seventh annual meeting of the Western Association of Shoe Wholesalers, at the Grand Pacific Hotel, Chicago, on January 6, a resolution was adopted, protesting against the tariff on hides, on the ground that it is injurious to both the manufacturer and the consumer of leather goods. The resolution was presented by Mr. H. J. Macfarland, of M. D. Wells & Co., shoe jobbers of Chicago. This was regarded as the most important action of the convention, which was largely attended. There appears to have been no special action taken in regard to rubber footwear. Mr. Orlando C. Smith, of the Smith-Wallace Shoe Co. (Chicago), who had held the position of president of the association for six years, having expressed a wish to retire, the position was filled for the ensuing year by the election of Mr. Charles W. Durrell, of Durrell Brothers (Cincinnati). Mr. S. W. Campbell, also of the Smith-Wallace Shoe Co., who has been the secretary-treasurer for six years, was reelected. Mr. I. H. Sawyer, of the Brown Shoe Co. (St. Louis), was elected first vice president.

#### NEW INCORPORATIONS.

ANCHOR TILE CO., December 19, 1904, under New Jersey laws; capital, \$200,000. The object is to manufacture and sell "Anchor" rubber floor tiling, which is covered by patents. Incorporators: John A. Sloan, Frank S. Katzenbach, Jr., and Horace T. Sloan. The company have an office at No. 137 East State street, Trenton, New Jersey—the address of the Mercer Rubber Co., who will make the tiling.

—The Diamond Rubber Co. of New York, January 9, 1905, under the laws of New York; capital, \$10,000. Incorporators and directors for one year: J. T. Smith and E. B. Root. New York city, and J. W. Ingram, Nyack, New York.

—Michelin Tire American Agency, Inc., January 9, 1905, under New York laws; capital, \$3500. Incorporators: E. D. Winans, George W. Wilder, and C. D. Wilder. This is the new agency in America of Messrs. Michelin & Cie., the French tire manufacturers. Their office is at No. 6 West Twenty-ninth street, New York.

—Pneumatic Horse Collar Co., December 22, 1904, under Maine laws; capital authorized, \$500,000. Directors: I. L. Fairbanks (president and treasurer) and L. A. Burleigh, Augusta, Maine; A. L. Norman, New York city; L. R. Downs, Saratoga, N. Y.

—The New Process Rubber Co., December 27, 1904, under the laws of the District of Columbia; capital, \$1,000,000. Incorporators: Lawrence Hufty, John P. Lang, and Thomas G. Miller. The Washington address is given as No. 416 Fifth street, and the executive offices as Room 1609, Railway Exchange, Chicago, Illinois. Applications for details at the latter office was met with the statement that the company were not yet prepared to make any announcement regarding their plans. This address, by the way, is that of The Vulcalose Co., interested in "vulcanized cellulose products."

—Hewitt Rubber Co. (Buffalo, New York), December 29, 1904, under New York laws; capital, \$500,000. Directors:



Herbert H. Hewitt, Ira B. Littlefield, Bertram M. Tate, Walter C. Mullett, and Harry B. Lamson, all of Buffalo. One of the incorporators reported on January 7: "The new company is not quite in readiness to go into particulars as to scope of manufacture, location of factory, etc., but probably will be very soon."

=The Rubber Appliance Co. (Springfield, Mass.), January 13, 1905, under Massachusetts laws; capital \$50,000. Directors: S. J. Rosenfeld (president), D. E. F. Radasch (secretary and treasurer), Samuel McWhorter. Office: Nos. 27-35 Taylor street, Springfield. The principal object of the company is to exploit a collapsible wash basin, for the use of automobilists and other travelers, and having compartments attached for holding various toilet accessories, for which a patent has been granted to Mr. Rosenfeld.

=Traver Packing Joint Hose Co., January 10, 1905, under New York laws; capital, \$20,000. Incorporators and directors for one year: Andrew McTigue, James Caffney, and P. Traver, all of Far Rockaway, New York, where the office of the new company is at present located. The object is to exploit a recently patented coupling.

=W. H. Salisbury & Co., Inc., under Illinois laws; capital, \$150,000. Incorporators: Warren M. Salisbury—who has become president of the corporation—J. T. Gilbert, and A. A. Gilbert. Object: To continue the business of W. H. Salisbury & Co., distributors of mechanical rubber goods and leather belting. The business dates from 1855, and derives its present name from William H. Salisbury, who became identified with it in 1874 and was its active head until the time of his death, in 1902. The firm advise THE INDIA RUBBER WORLD that they are looking forward to a good year's trade.

=Towner & Co., Inc., January 19, 1905, under Tennessee laws; capital, \$36,000. To succeed the firm of Towner & Co., wholesalers of mechanical rubber goods, Memphis, Tennessee. President, H. N. Towner; secretary and treasurer, Richard Paul Towner.

#### CANADIAN SHOE TRADE IN CONVENTION.

THE Rubber Shoe Manufacturers' Association and the Rubber Boot and Shoe Jobbers' Association (of Canada) were in session at the Windsor Hotel, Montreal, on January 17. The question of prices for the coming season was discussed to some extent, but without any conclusions being reached on account of the uncertainty in regard to the market for crude rubber. It is understood that no statement of prices will be given out by the manufacturers until March 1, which is the usual date for their appearance. The Jobbers' Association elected the following officers:

*President*—J. D. COLE, Montreal.  
*Vice Presidents*—P. POCKOCK (Ontario), J. G. WATSON (Quebec), M. D. PRIDE (Maritime provinces), A. CONGDEN (Manitoba), and J. DAMER (British Columbia).

*Secretary*—C. B. COLE, Toronto.  
 In the evening a banquet given to the members of the two associations by the wholesale rubber trade of Montreal was attended by about 75 guests, all directly connected with the industry or trade. The banquet was a decided success in all details—pecuniary, musical, and oratorical. Mr. D. Lorne McGibbon, of the Canadian Rubber Co. of Montreal, who acted as chairman during the early part of the evening, resigned in favor of Mr. James Acton, of *The Canadian Shoe and Leather Journal*, who proved an admirable toast master. Besides the toast to the King, those proposed were "Our Country," The Manufacturers' Association, The Jobbers' Association, "The Allied Trades," and "The Press," each being responded to by two or more speakers who were listened to enthusiastically and applauded frequently.

#### HARTFORD RUBBER WORKS CO.—"FACTORY NO. 3."

THE factory owned by the Rubber Goods Manufacturing Co. at New Brunswick, New Jersey, and operated hitherto under the name of the India Rubber Co., now bears the sign of the Hartford Rubber Works Co., being designated as their "Factory No. 3." Their "Factory No. 2" is the plant erected last year at Hartford, across the street from the company's original factory. The demand for the Dunlop tires having increased so much of late, it was considered desirable to largely increase the facilities for the production of these tires, and in order to be protected against any possible emergency it was decided not to have their manufacture confined to one establishment. The New Brunswick factory, therefore, will be devoted to the manufacture of Dunlop tires, in addition to a general line of mechanical goods.

#### SALE OF THE MILLTOWN RUBBER PLANT.

THE sale is reported of the plant organized by the late John C. Evans, and operated by the Milltown India Rubber Co. (Milltown, New Jersey) under his supervision. The factory has not been operated since the death of Mr. Evans, nearly two years ago. The purchaser was Willis W. Russell, No. 140 Nassau street, New York, who, since the first report of the sale, has had incorporated in New Jersey the Willis W. Russell Card Co., with \$500,000 capital authorized, the object of the company being to manufacture playing cards.

#### TO MAKE RUBBER SHOES AT LAWRENCE.

IN pursuance of the plan for the manufacture of rubber boots and shoes at Lawrence, Massachusetts, of which mention has been made already in these pages, the Globe Mills Rubber Co. has been incorporated under the laws of Maine, with \$200,000 capital authorized. The company has been organized with Loring M. Monk, of Sharon, Mass., president and general manager and L. C. Moore, of Lawrence, treasurer. James Hamilton has been selected as superintendent of the factory. The premises to be occupied are known as the Globe mills and are owned by the American Woolen Co.

#### A RUBBER WORKER FOR FIFTY-FOUR YEARS.

MATTHEW MCKEON, foreman of the cutting department of the National India Rubber Co. (Bristol, Rhode Island), resigned his position on January 14, after having been a rubber worker for 54 years. At the age of 16 he entered the rubber factory of Dr. Isaac Hartshorn at Providence, in 1851. After it was burned, in 1854, he was engaged by Brown, Bourn & Chaffee (later the Providence Rubber Shoe Co.), leaving them to go to the Beverly Rubber Co. for a year, after which he was with the Boston Rubber Shoe Co. until 1861, when he joined the Union army. At the close of the war he entered the employ of the Providence Rubber Shoe Co., going to Bristol when the National Rubber Co. began manufacturing in 1865. He has remained in the factory until the present, and resigned only upon the instance of his physician. He has been succeeded as foreman of the cutting department by Isaac H. Gorhan.

#### NEW METHOD OF TENDERING FOR RUBBER SUPPLIES.

THE director of supplies of the city of Philadelphia has awarded a contract to the Garlock Packing Co. (Palmyra, New York) for the rubber goods required by the water bureau of that city during 1905, on a lump bid of \$17,500. It is stated that the cost of the rubber goods required by the water bureau last year was \$36,000, and that the annual cost for several years past was from \$35,000 to \$40,000. Tenders were invited for supplies for 1905 in December last, when there were ten bidders, but the authorities could not determine which was the lowest. New tenders were invited with the idea of a lump sum being named, but only two bids were received, most of the

former bidders claiming not to be able to understand the specifications of the quantity of supplies needed. The two bids received were from Clement, Restine & Co., \$19,500; and the Garlock Packing Co., \$17,500.

#### TO MAKE RUBBER FOOTWEAR IN AKRON.

THE B. F. Goodrich Co. (Akron, Ohio) have made announcement of their decision to add rubber boots and shoes to the output of their factory. This decision has been reached after having been considered for some time, and plans have been so far advanced that the company expect to be able to market their new product next season. Plans are already under way for buildings for a large addition to the plant of the company, which will provide for the employment of 400 or 500 persons more than at present. The new department will be in charge of Mr. William E. Hemenover, who is already on the ground in charge of preparations. Mr. Hemenover has had 24 years experience in connection with the manufacture of rubber footwear, of which 13 were spent with the Goodyear Rubber Co. at Middletown, Connecticut. He was next connected with the National India Rubber Co.—which by that time had been acquired by the United States Rubber Co.—after which he superintended the construction of the plant of the Monarch Rubber Co. (now the Banner Rubber Co.) at St. Louis, being subsequently in charge of its operation.—This announcement is the most interesting development of the month in the rubber trade. The Goodrich company's equipment for such a line is singularly complete, and as they are accustomed to doing things on a large scale, their product may be expected to become very important. With a grinding and calendering capacity greater than any other single rubber factory in the United States, with by far the best laboratory equipment, with an organization that is an near perfection as possible, with ample capital, and unrivalled facilities for marketing goods, they will, no doubt, soon be classed among the large producers of rubber footwear. There is also a possibility that a company that has gone into the manufacture of rubber goods on such a sound scientific basis as they have, and with all the experience that has come through their exhaustive test of all types of rubber, compounding materials, and compounds, may have original ideas as to their own shoe compounds. Further than this, as large manufacturers of reclaimed rubber, and big buyers of crude, they will be in a position to reap all the advantages that large purchasers always command.

#### TO DOUBLE THEIR CAPACITY.

THE United and Globe Rubber Manufacturing Cos. of Trenton, N. J., advise THE INDIA RUBBER WORLD that they are preparing plans and specifications for the erection of buildings, with an equipment of machinery, which will double their present facilities for the production of mechanical rubber goods. These buildings will be located to the north of and adjoining the present factory. The company have owned for some time past a large plot of ground for the purpose of expansion, which they now find necessary. It is understood that the new buildings will be practically a duplication of the present plant, including an additional power house.

#### GROWTH OF A SOUTHERN RUBBER HOUSE.

MESSRS. TOWNER & CO., extensive distributors of mechanical rubber goods, with headquarters at Memphis, Tennessee, have applied for a charter incorporating their firm, which, from February 1, the commencement of their new business year, will be known as Towner & Co., Incorporated. The management will remain in the same hands, namely H. N. and R. P. Towner. The change is made solely in order that the firm may have the

advantages which in the modern conduct of business are enjoyed by a corporation. The business of the Messrs. Towner was established in Memphis in 1879, since which time they have made three moves, each time requiring larger premises on account of the continued growth of their business. They moved into their present quarters in January, 1898, and expect to remain there for a little while yet, although much cramped for room owing to the fact that their business is still growing. The stock of belting which they now carry is much larger than they formerly carried, and they have added from time to time a number of packings, emery wheels, and other lines in the mill supply department. The company have at all times three traveling men, and their territory has been extended until it covers west Tennessee, southern Kentucky, northern Alabama, all of Mississippi, Arkansas, and Louisiana, southeastern Missouri, and a good part of Texas.

#### THE GOODRICH ANNUAL MEETING.

THE annual meeting of The B. F. Goodrich Co. (Akron, Ohio), on January 16, resulted in the reelection of the officers, as follows:

*President*—GEORGE T. PERKINS.  
*Vice President*—BENJAMIN C. WOOD.  
*Secretary*—RICHARD P. MANNING.  
*Treasurer*—W. A. FOLGER.  
*General Manager*—HARRY H. SHEPARD.

These officers, with George W. Crouse and Charles C. Goodrich, constitute the board of directors.

#### CONSUMPTION OF RUBBER IN CANADA.

THE imports of crude rubber for consumption in the Dominion of Canada for the fiscal year ended June 30, 1904, were larger than in any preceding year. The following figures are from official statements:

YEARS.	India-rubber and Gutta-percha.	Recovered Rubber	Total
In 1899-1900... pounds	3,004,828	2,086,952	5,091,780
In 1900-01, .....	3,010,802	1,977,775	4,924,577
In 1901-02, .....	2,911,438	1,881,550	4,773,088
In 1902-03, ....	2,861,453	2,542,671	5,404,124
In 1903-04, ....	3,213,362	2,539,926	5,753,288

#### NATIONAL INDIA RUBBER CO.—NEW OFFICERS.

MR. HARRY H. SHEPARD, general manager of this company since May, 1900, and identified in an important way with its management for a number of years previously, tendered his resignation on January 16, to take effect at once, and it was accepted. At a meeting of the directors of the company in New York, on January 18, the office of general manager was abolished, after which the following appointments were made: Le Baron C. Colt, agent; William Hodgkinson, superintendent; Elwyn C. Fish, assistant superintendent. The president of the company, Colonel Samuel P. Colt, who has also been treasurer, resigned the later position, and Walter DeF. Brown, who for many years has been secretary of the company, was elected to fill the office of treasurer as well. The directors adopted resolutions expressing regret at the retirement of Mr. Shepard and their high appreciation of him personally and of his services to the company. In response to an inquiry from THE INDIA RUBBER WORLD, Mr. Shepard said: "I have not as yet formulated any plans for the future. After 29 years' active service in the rubber business I feel that I am entitled to a short rest, after which I hope again to take up the rubber line in some form or another." Mr. Shepard is a member of the Rhode Island senate and of its finance committee, and it is understood that this position will not be affected by his business change. —Mr. Colt, the newly appointed agent of the company, is a native of Bristol, a son of Judge Le Baron B. Colt of the United States circuit court, a graduate from Brown University, is 28 years old, and has been in training at



the Bristol factory for several years for a position of importance in connection with the rubber industry. Mr. Hodgkinson filled the position of assistant to Mr. Shepard as general manager. Mr. Fish has been for some time foreman of the calender room. — The factory of the company at Bristol has been operated of late to its full capacity, giving employment to 1400 people. The boot and shoe department has been turning out 24,000 pairs daily—the largest production ever reported for this factory.

#### THE REPUBLIC RUBBER CO. (YOUNGSTOWN, OHIO).

At the annual meeting of shareholders on January 17, the following board of directors was chosen: Warner Arms, H. K. Wick, John C. Wick, George Tod, John Tod, Charles H. Booth, A. E. Adams, H. M. Robinson, and Robert Bentley. The directors subsequently elected the following officers:

*President and Treasurer*—WARNER ARMS.

*Vice President*—CHARLES H. BOOTH.

*Secretary*—JOHN TOD.

#### OFFICES OF THE FISK RUBBER CO.

The list of officers of The Fisk Rubber Co. (Chicopee Falls, Massachusetts) has been extended by the addition of two vice presidents, announced at a meeting held on January 19. The complete list follows:

*President*—HARRY T. DUNN.

*First Vice President*—E. H. BROADWELL, manager of the Detroit branch.

*Secretary Vice President*—FRANK C. RIGGS, manager of the Chicago depot.

*Treasurer*—ATLEED N. MAYO.

*Clerk*—HARRY G. FISK.

*Directors*—A. N. Mayo, H. T. Dunn, H. G. Fisk, Edward Pynchon, W. T. Baird, P. T. Jackson, Jr., E. H. Broadwell.

#### TRADE NEWS NOTES.

The staff of the Milwaukee branch of the Goodyear Rubber Co. were given a dinner by the company, in accordance with an annual custom, at the Hotel Pfister, on the evening of January 10. Mr. W. W. Wallis, the branch manager, was toastmaster.

=Ernst H. Brandt has become assistant general manager of The Fisk Rubber Co., and is located at the company's main office, Chicopee Falls, Massachusetts. He was connected with the Hartford Rubber Works Co. from 1891 to 1903, resigning from the position of New York manager for that company at the beginning of the latter year to enter another line of business.

=At the Edgeworth factory of the Boston Rubber Shoe Co., on January 4, the main engine was disabled to an extent requiring several weeks for its repair. Meanwhile part of the working force has been transferred to the other factory, and the Malden Electric Light Co. have been supplying some power.

=The B. F. Goodrich Co. (Akron Rubber Works) are credited, in a local review of trade for 1904, with having made, during that year, the largest sales in their history. While the output of rubber tires has increased, the mechanical rubber branch continues to hold the place of first importance in the factory.

=A movement is on foot among the employes of the American Hard Rubber Co. at College Point, Long Island, to organize a factory fire brigade.

=The Miller Rubber Manufacturing Co. (Akron, Ohio) have established a branch at Hamburg, Germany, at Grosse Reichensstrasse 9, of which Louis Eising is the manager.

=The Indiana Rubber and Insulated Wire Co. (Jonesboro, Indiana) have sent out a plain but serviceable calendar for 1905, one leaf for each month, printed in unusually large figures.

=The Republic Rubber Tire and Shoe Co. (New York), will be in a position shortly to market a new soft tread horse-shoe, for which a patent was granted on January 10 to Manager Frederick E. McEwen. This is a rubber shoe, with closed heel, having imbedded in it a single-piece nail plate of steel.

=The Laurel Rubber Co. filed with the secretary of state of New Jersey, on January 18, a certificate of increase of capital from \$10,000 to \$15,000.

=Fire started from an explosion in one of the buildings of the Stoughton Rubber Co. (Stoughton, Massachusetts) on the night of January 18, and caused a loss of \$3000, which is covered by insurance. The fire occurred in a building devoted formerly to making golf balls, but not used for a year past, and the cause of the explosion remains to be explained.

=Suit has been brought against the Goodyear Tire and Rubber Co. (Akron, Ohio) by Adam Bender, who claims \$10,000 damages for injuries alleged to have been sustained in October last, while employed in the company's factory. His hand was caught in a set of rolls, and he charges the company with negligence in not keeping a stop clutch in working order.

=At the auction sale of manufacturing stocks in Boston during the week January 16-21, nineteen shares of the Boston Belting Co. (par \$100) were sold at \$210 to \$212.50.

=The new reclaiming plant of the Canadian Rubber Co. of Montreal is now completed and in successful operation. The company spent a large sum on this latest addition to their extensive factories in Montreal, and it is one of the best equipped reclaiming plants on the Continent.

=The annual meeting of shareholders in the New York Rubber Co. was due to be held at the company's offices on January 31, for the election of trustees for the ensuing year.

=That there are still good specialties in the rubber trade is proved in the case of "Rainbow" packing, for which 1904 was the banner year, the sales amounting to 2,942,468 pounds. This is 18,000 pounds more than in 1903, and 224,000 pounds more than the sales of 1902.

=Mr. Arthur Devereau Thornton, the well known general superintendent of the Canadian Rubber Co. of Montreal, began life as a sailor. Some 15 years ago he studied and obtained his diploma for chemistry, went into the rubber business and to-day is a well recognized expert in crude rubber.

=Messrs. Parker, Stearns & Sutton (New York) have distributed lately a handsome little memorandum book, with several pages of printed matter for ready reference, the whole being comprised in an artistically embellished cover of celluloid.

=The firm of Neale & Co. has been established, at Nos. 82-92 Beaver street, New York, by E. L. Neale and W. H. Staats, who compose also the firm of Neale & Staats, exporters of rubber from Pará and Manáos, Brazil. They have been established for some years on the Amazon.

=In its annual estimate of the value of the electrical apparatus produced in the United States, for 1904, the *Electrical World and Engineer* (New York) puts down "Insulated wires and cables, and submarine cables," at \$35,000,000. Its estimate of the value of the same product in 1903 was \$30,150,000. Its total estimate of electrical apparatus for the two years is as follows: \$158,650,000 in 1903, \$175,500,000 in 1904.

=Mr. Samuel H. Cable informs THE INDIA RUBBER WORLD that the report that he intended to connect himself with the Neponset Rubber Co., and take charge of the manufacture of carriage cloth, is incorrect.

=In an industrial review of the city of Chicago for 1904 the *Record-Herald*, of that city, estimates the value of rubber goods produced at \$6,000,000, as against \$4,800,000 in the preceding year.

=The New York Credit Men's Association is doing a good work, in which it deserves the support of the merchants and manufacturers of the state. At the recent annual meeting in New York some addresses were made on bankruptcy legislation which should prove of great interest to business men, and in regard to which the secretary of the association writes to THE INDIA RUBBER WORLD: "We have a limited number of copies that you might distribute to such of your patrons as will write for one to our office, No. 320 Broadway (New York)."

=Bernard J. McLoughlin, hitherto shipping foreman for the Woonsocket Rubber Co.'s Millville factory, has succeeded Rollin E. Woodworth, lately shipping foreman at the "Alice" mill, and will have charge hereafter of the shipping from both factories.

=Judge Holt of the United States district court in New York, has appointed Benjamin B. Blydenburgh receiver in bankruptcy for the assets of Wilkomir & Lasker, who did business as the Bedford Rubber Co., waterproof manufacturers, at No. 138 Prince street, New York, on the application of Thomas F. McCarthy, creditor for \$1,233. The assets are estimated at \$3,000. Mr. Lasker started the business in April, 1901, being joined by Mr. Wilkomir a year later.

=A suit has been filed against the Pennsylvania Rubber Co. (Jeannette, Pa.), for alleged infringement of the G & J "clincher" tire patents. A similar suit has been pending for some time against the United States Agency Michelin Tire Co. (New York).

=Mr. Kirk Brown, who for some years was at the head of the American Dunlop Tire Co., and is now general manager of the Yale & Towne Manufacturing Co.—the "Yale" lock company—was a visitor to the Madison Square automobile show. Connected with The Hartford Rubber Works Co.'s exhibit at the show was Mr. Alexander O. Holroyd, who has been continuously identified with the exploitation of the Dunlop tire since its first introduction in America, having been previously associated with Dr. John B. Dunlop, the tire inventor.

=The Diamond Rubber Co. (Akron, Ohio) have filed a motion for a new trial in the suit for damages of Addison McClurg, a former employé who sought to recover for the loss of a hand while working for the company, alleging negligence on the part of the latter. McClurg won on the first trial, but a higher court reversed the verdict. [See THE INDIA RUBBER WORLD, June 1, 1904—page 317.] A second trial resulted, during the past month, in another verdict for McClurg, and the company's motion for still another trial is based upon a count of alleged errors.

=Messrs. John Royle & Sons (Paterson, New Jersey) are sending to their friends this year, as usual, a handsome pocket memorandum book, with spaces for every day in the year, a calendar, and data useful for reference, not forgetting a mention of the machinery which they produce for the rubber and other industries.

=The Philadelphia address of The B. F. Goodrich Co. has been changed from No. 922 to No. 909 Arch street.

=The Pennsylvania Rubber Co. (Jeannette, Pa.) have become engaged very extensively in the manufacture of floor tiling. In addition to making tiling on designs of their own, they have acquired from the Alden Rubber Co. (Akron, Ohio), the patent (No. 680,468—August 13, 1901) granted to Joseph K. Sierer, covering what has become known in the trade as the "Master Key" tiling.

=Messrs. James Boyd & Brother, dealers in mechanical rubber goods, No. 14 North Fourth street, Philadelphia, as usual have distributed to their friends in the trade a calendar for the year, arranged with space for daily memoranda, one leaf for

each week. There are also facts and figures of use for permanent reference.

=An involuntary petition in bankruptcy was filed against the Highland Rubber Co. (Reading, Massachusetts), on January 17, by three creditors whose claims aggregate \$5,007.92. This is a New Hampshire corporation, organized in 1900 with \$100,000 capital authorized, and has been engaged in the manufacture of small rubber specialties on the premises occupied at one time by the Chauncey Rubber Co. and later by the Eastern Rubber Co.

=J. H. Stedman & Co., Inc. (Boston), scrap rubber merchants, have sent us a very handsome wall calendar for 1905.

=The Whitman & Barnes Manufacturing Co. at the beginning of the year distributed from their Chicago office a calendar for 1905, the ornamental feature of which, as last year, was a copy of the famous painting by the Scotch artist Watson, entitled "Sheep in the Highlands," and now in possession of the company. The demand for these calendars was so great that the supply has already been exhausted.

=Mr. Park Matthewson, who has been connected for six or seven years with various rubber manufacturing companies in an important capacity, including of late the International A. & V. Tire Co., has severed his connection with that line to become New York manager and special representative of the International Lumber and Development Co. (Philadelphia), a corporation with \$6,000,000 capital authorized, owning and operating an estate of 300,000 acres in Mexico, from which they are already exporting mahogany and other hard woods, and are planning to market rubber from the wild trees on the estate and also from planted trees now under cultivation.

=A. Adamson, manufacturer of rubber machinery (Akron, Ohio), has distributed to his customers a calendar for the year, the central feature of which is an attractive half tone landscape view, the whole mounted on a card 11x14 inches.

=The Hurd & Fitz Gerald Shoe Co. (Utica, New York) have been incorporated, under New York laws, with \$75,000 capital, to continue the wholesale business in boots and shoes and rubbers conducted since 1892 under the firm name D. C. Hurd & Fitz Gerald. The business has grown to important proportions, and one object of the change is to provide for the admission to a share in the profits of several valued employes. The officers are: D. C. Hurd, president and treasurer; M. J. Fitz Gerald, vice president; Hugh R. Jones (who has been with the house for seven years), secretary and assistant treasurer. The company now occupy 18,000 square feet of floor space at Nos. 8-12 Catherine street, Utica.

=A handsome little calendar for 1905, for the desk or office wall, one leaf for each month, is distributed by the Stamford Rubber Supply Co. (Stamford, Connecticut).

=A news paragraph having been printed recently to the effect that the factory of the Boston Rubber Shoe Co. at St. Jerome, Canada, had been sold, THE INDIA RUBBER WORLD is requested to mention that there is but one Boston Rubber Shoe Co., and its factories are located at Malden, Massachusetts. It may be added that there is a rubber factory at St. Jerome, which at one time manufactured rubber footwear stamped "Boston Rubber Co.," and this factory, after having been idle for a year or more, is reported to have changed hands.

=The factory of the Atlantic Rubber Shoe Co. (Providence, Rhode Island) has been closed indefinitely while the directors are considering a policy to control the future management of the company's business.

=Mr. Robert P. Parker, formerly manager of the New York branch of The Hartford Rubber Works Co., is now connected with the Apperson Brothers Automobile Co. (Kokomo, Indi-



ana) and attended the Madison Square Garden automobile show in connection with that company's exhibit.

=James H. Manchester, foreman of the shoe department at the factory of the National India Rubber Co. (Bristol, Rhode Island) for 30 years, has resigned, being succeeded by Edward E. Wilkinson, of the same factory.

#### NEW ENGLAND RUBBER CLUB.

THE midwinter dinner of the New England Rubber Club is planned for the evening of February 24. The Hon. John D. Long and the Hon. Samuel W. McCall have promised definitely to be present, and Colonel Samuel P. Colt has promised provisionally. Young's Hotel, Boston, has been selected as the banqueting place.

#### UNUSUAL FIRE HOSE TESTS.

THE results of the tests of fire hose held recently at the repair shops of the New York fire department at No. 130 West Third street, have given great satisfaction to the Manhattan Rubber Manufacturing Co., to whom were awarded a contract for 12,500 feet of  $2\frac{1}{2}$ " four ply rubber fire hose. The specifications called for friction that would not separate more than  $3\frac{1}{2}$ " in ten minutes, under 20 pounds pressure. The test went far better than the specifications, separating only  $\frac{5}{8}$  inch. In the stretching of the tube the specification allowed a permanent set of  $\frac{1}{4}$  inch after releasing for 10 minutes. In this test the hose was absolutely perfect, as there was no permanent set. Under the pressure tests the elongation was limited to 30%, and the three pieces tested elongated respectively, 24", 19", and 18". The expansion was limited to  $\frac{1}{8}$  inch and none of the hose expanded more than  $\frac{1}{16}$ ". The allowance for twisting was one revolution, and the hose in no case twisted more than one-half of the revolution. All these tests were made, by the way, under 300 pounds pressure, and under the personal supervision of Chief John H. Leonard and his assistants. The remarkable results have made the Manhattan Rubber Manufacturing Co. the recipients of many congratulations from the trade.

#### PERSONAL MENTION.

DR. MAXIMILIAN TOCH of New York, who has for some years been carrying on a line of research relating to the vulcanization of India-rubber, has gone to Porto Rico at the instance of the department of agriculture, but on his return expects to bring his discoveries and conclusions on rubber before the American Chemical Society.

=Mr. Arthur W. Stedman, of George A. Alden & Co. (Boston), recently had a very narrow escape from pneumonia, being confined to his house for more than a week, but is now out again, receiving the congratulations of the trade on his recovery.

=The name of Colonel Samuel P. Colt, president of the United States Rubber Co. is being used freely by the Rhode Island newspapers in connection with the succession to the Hon. George Peabody Wetmore, as United States senator from that state.

=Mr. S. H. C. Miner, president of the Granby Rubber Co. (Granby, Quebec), lately spent a couple of weeks in Boston, where he has large business interests.

=Mr. Roswell Converse Whitmore, of the Boston Belting Co., was married on January 4 to Miss Gertrude Lillian Ashton, of Newton Center, Massachusetts. The bridegroom is the son of Mr. George P. Whitmore, secretary of the company named, and widely known and esteemed in the New England rubber trade.

=Mr. Russell G. Colt, son of President Samuel P. Colt, of the United States Rubber Co., and who has just returned from a voyage to the Amazon on the yacht *Virginia*, has held a posi-

tion for some time at the "Alice" mill of the Woonsocket Rubber Co. It is understood that he will now be located in New York, in the offices of the General Rubber Co.

=Mr. John C. Wilson, sometime connected with the Hartford Rubber Works Co., later president of the India Rubber Co. (New Brunswick, New Jersey), and now a planter in one of the southern states, was a visitor to the New York automobile show.

=Mr. George W. Blanchard, formerly general superintendent of the Rubber Goods Manufacturing Co., is now a banker, and holds the office of vice president of the Passaic National Bank, at Passaic, New Jersey.

#### GREAT INTEREST IN RUBBER IN BROOKLYN.

QUITE unwittingly, THE INDIA RUBBER WORLD seems to have ruffled the sensibilities of some one at the fountain head of true journalistic ethics. Measured by the standards of the Brooklyn *Daily Eagle*, it has lacked dignity, whereat our sorrow is beyond the capacity of words to express it. And all on account of "rabbit weed"!

For two years this journal has presented from time to time such facts as could be gleaned from the voluminous reports afloat in the West concerning the great discovery of rubber in Colorado. Every attempt has made to present such news fairly, since no objection exists in this office to Colorado supplying the whole world with rubber if she can. It happens that in our last issue an extract appeared from an article on Colorado rubber in the leading newspaper of Brooklyn, since which time the following letter has come to hand:

EDITORIAL DEPARTMENT.  
THE BROOKLYN DAILY EAGLE.

BROOKLYN, N. Y., JANUARY 21, 1905.

MR. HENRY C. PEARSON,  
Editor of THE INDIA RUBBER WORLD,  
150 Nassau street, New York.

DEAR SIR: Referring to my story on *Picradenia floribunda utilis*, the orthography of which appears to have been too much for you, which has been honored by a mention in your columns, permit me to suggest that if you have any evidence that the claims made in behalf of the plant are erroneous, it is your duty, and no doubt it would be your pleasure, to make such evidence public. If you have already done so I would thank you to give me the date of the issue in which it appears that I may get a copy and inform myself. On the other hand, if the plant offers an auxiliary source of supply of rubber, the discovery is surely of sufficient importance to be worthy a dignified presentation in a journal which assumes to be the organ of the rubber trade. And certainly if gooseberry wine and counterfeit money are by-products of the weed, as you assert, the news value of that fact seems to be more than the nine line paragraph in your January issue.

It seems to me there is a good story for you in *Picradenia floribunda utilis* any way you play it. Very truly yours,

C. F. CARTER.

Here seemed to be a discovery of real value; here was a source of information regarding the new rubber, which THE INDIA RUBBER WORLD would be more than glad to make use of. So a letter was sent post-haste to the Brooklyn office, inviting its coöperation in making "a dignified presentation" of the facts in the case. And here is the response, dated January 23, 1905:

DEAR SIR: Really, I do not know why the rubber producers of Colorado do not allow you to see samples of their product. But I do know that I had not the slightest difficulty whatsoever, not only in obtaining all the samples I wanted, but also in obtaining permission to watch the process of manufacturing the samples.

Replying to your second question, if my eyesight is at all trustworthy

I have seen letters tending to show that the Colorado people have tried to interest leading rubber manufacturers in their product and that such endeavors have been successful.

Regarding your kind offer of a page of your valuable space at regular rates I beg to say that I have not the slightest desire to prove anything whatsoever except that you do not know news when you see it, and inasmuch as that was already obvious my letter was supererogatory. Very truly yours,

C. F. CARTER.

Thus is the hope of getting news of the Colorado rubber from Brooklyn crushed to earth. But the fact that a great interest in the new rubber exists in Brooklyn has been shown, and that is something. If one word more be allowed, it will be to remark that, in view of the unsympathetic attitude of Brooklyn, we shall extract all the comfort possible from the following lines, copied from the *Salida Mail*—printed in the heart of the Colorado rubber district—of January 19:

#### Rubber Weed Excites the Attention of The World.

THE INDIA RUBBER WORLD, the official organ of the great rubber industry of the United States, and which largely circulates in the Old World and the rubber producing countries, published in

New York, comes out in the January issue and gives two pages to the review of the Colorado rubber weed. It quotes from O. J. Kennedy's book, from the *Record*, the *Rocky Mountain News*, the *Brooklyn Eagle*, and Mr. Leonhardy of Buena Vista, and out of the lot, gives the main points and general facts.

#### NEW FIELD FOR CANADIAN CAPITAL.

THE Vancouver (British Columbia) *Province* reports the sailing, on January 6, of John H. Grace, on a mission relating to a new source of crude rubber. The report says: "The destination of Mr. Grace is one of the South Sea islands, and in an inside coat pocket he carries a good sized roll of money, contributed by Vancouver capitalists for the purpose of developing the rubber industry on an island the name of which will not be made public until the proper concessions have been secured for the working of the rubber industry." Mr. Grace, who is referred to as having formerly explored this mysterious island, where he was first to discover the presence of rubber, meant to proceed first to Sydney, New South Wales, where he would equip himself for proceeding to his ultimate destination.

## REVIEW OF THE CRUDE RUBBER MARKET.

AS will be seen from the quotations presented this month, a material advance has taken place in rubbers of all grades. This advance has been most marked in Pará sorts, which may be explained in a measure by the fact that, within the past twelve months, the production of medium sorts on the whole has shown a gain, after a period of decline lasting some two or three years. A study of all the details presented in this department will show that the Congo production has not increased, but various other producing areas—notably French Africa—have been brought of late to a higher stage of production. In this connection attention is called to the summary in another column of the annual review of the Messrs. Figgis, of London.

The hope has been entertained that the much talked of Acre district, now that peace has been restored there, would become a larger contributor to the world's rubber supplies than ever before. The receipts from that region, however, thus far during the year have not been liberal. It remains to be seen whether the months of February and March will show an important increase from that quarter. If this should be the case, the effect may be to make easier prices in the Pará market.

Arrivals at Pará of rubber of all kinds for the first seven months of the current year, have been as follows:

	1904.	1903.	1902.	1901.
July .....	1200	1200	1280	1240
August .....	1290	1370	1230	1250
September .....	1940	1670	2010	1810
October .....	2640	2280	2440	2460
November .....	2970	2650	2980	2800
December .....	3530	2990	3530	4400
January .....	3800	2400	4300	3000
Total .....	17,440	14,740	17,830	17,560

Reports from England refer to the market as very firm. At the latest London auctions, on January 20, sales were made at higher prices, both for Pará sorts and mediums. Sales have been made of hard fine Pará January and near delivery at 5s. 3d.; February-March at 5s. 2½d.; soft fine Pará spot at 5s. @ 5s. 1d.

Cable advices from Antwerp indicate that at the monthly in-

scription sale at Antwerp on January 27, at which about 485 tons were offered, the entire quantity sold at higher figures than the official valuations, bringing the average returns to a record figure. Details regarding the kinds offered appear in another column.

Bordeaux received during the year past 1183 tons of rubber, mainly from French African sources. The increase of the imports at this port is illustrated by the following figures:

1901 .....	348,000	1903 .....	1,101,235
1902 .....	664,900	1904 .....	1,182,703

Following is a statement of prices of Pará grades, one year ago, one month ago, and on January 31—the current date.

PARÁ.	Feb. 1, '04.	Jan. 1, '04.	Jan. 31.
Islands, fine, new...	99@100	114@115	121@122
Islands, fine, old.....	@	none here	none here
Upriver, fine, new.....	104@105	119@120	121@125
Upriver, fine, old.....	none here	none here	none here
Islands, coarse, new.....	64@ 65	65@ 66	70@ 71
Islands, coarse, old.....	none here	none here	none here
Upriver, coarse, new.....	83@ 84	93@ 94	92@ 93
Upriver, coarse, old.....	85@ 86	none here	none here
Caucho (Peruvian) sheet.....	64@ 65	69@ 70	71@ 72
Caucho (Peruvian) ball.....	75@ 76	79@ 80	80@ 81

The market for other sorts in New York shows a slighter advance, as follows:

AFRICAN.		CENTRALS.	
Sierra Leone, 1st quality	97 @98	Esmeralda, sausage...	81 @82
Massai, red.....	97 @95	Guayaquil, strip.....	70 @71
Benguella.....	74 @75	Nicaragua, scrap...	79 @80
Cameroon ball.....	64 @65	Panama, slab.....	61 @62
Avera flake.....	32 @33	Mexican, scrap.....	80 @81
Lopori ball, prime....	103 @104	Mexican, slab.....	61 @62
Lopori strip, prime....	93 @94	Mangabeira, sheet....	48 @57
Ikelemba.....	104 @105	EAST INDIAN.	
Madagascar, pinky....	84 @85	Assam.....	42 @43
		Borneo.....	42 @43

#### Late Pará cables quote:

Per Kilo.		Per Kilo.	
Islands, fine. ....	6\$500	Upriver, fine.....	7\$600
Islands, coarse .....	3\$300	Upriver, coarse.....	5\$300
Exchange, 14d.			

#### Last Manáos advices:

Upriver, fine.....	7\$350	Upriver, coarse.....	4\$650
Exchange, 14½d.			



## NEW YORK RUBBER PRICES FOR DECEMBER (NEW RUBBER).

Upriver, fine.....	1.18@1.30	77 @ 81	80 @ 91
Upriver, coarse.....	89@ 97	77 @ 81	85 @ 93
Islands, fine.....	1.14@1.26	88 @ 94	74 @ 88
Islands, coarse.....	65@ 72	54 @ 57	49 @ 60
Cameta.....	65 @ 71	54 @ 57	54 @ 61

In regard to the financial situation, Albert B. Beers (broker in India-rubber, No. 68 William street, New York), advises us:

"During January money has continued easy, with a fair demand for paper from city and out-of-town banks at 4½ @ 5 per cent. for the best rubber names, and 5½ @ 6 per cent. for those not so well known."

## Statistics of Para Rubber (Excluding Caucho).

NEW YORK.				
	Fine and Medium	Coarse.	Total 1904.	Total 1903.
Stocks, November 30.....	5	2	7	32
Arrivals, December.....	1185	520	1705	1502
Aggregating.....	1140	522	1712	1534
Deliveries, December.....	1139	504	1643	1478
Stocks, December 31.....	51	18	69	72

PARÁ.			ENGLAND.		
1904	1903	1902.	1904	1903.	1902.
Stocks, Nov. 30.....	540	145	155	180	370
Arrivals, December...	3220	3185	2990	670	1300
Aggregating.....	3760	3380	3145	850	1470
Deliveries, December..	3560	3010	2780	675	1100
Stocks, Dec. 31 ..	200	370	365	175	545

	1904.	1903.	1902.
World's visible supply, December 31....tons	2444	2070	3188
Pará receipts, July 1 to December 31.....	12,551	12,540	11,570
Pará receipts of Caucho, same dates.....	779	900	604
Afloat from Pará to United States, Dec. 31...	1520	908	855
Afloat from Pará to Europe, December 31....	480	1100	1011

## Antwerp.

THE regular monthly inscription of rubber—the first this year—occurred on January 27, when 483 tons were announced to be offered. The table which follows embraces a classification of the lots of rubber catalogued for the sale, and the broker's estimation, in francs per kilogram:

	Kilograms	Estimates
Lower Congo:		
Thimbles, red.....	5,833	5.40
Thimbles, black .....	3,512	5.40-9.75
Ball.....	4,489	10.00
Congo Katanga .....	41,424	9.50-10.75
Congo Wamba.....	8,305	6.62-10.00
Congo Djuma.....	33,741	6.10-10.20
Congo N'anga.....	1,024	5.75
Congo Kasai, red.....	89,931	8.40-10.90
Congo Kasai, black.....	10,871	9.75-11.00
Upper Congo:		
Aruwimi.....	15,207	8.25-10.50
Lomami.....	8,423	9.75-10.50
Lopori.....	3,254	11.00
Lopori.....	18,277	6.90
Equateur .....	12,665	7.00-10.50
Equateur.....	17,144	10.10-10.75
Monga.....	44	11.50
Yenga.....	2,511	11.25
Monbogo.....	3,307	8.50
Lasleped II.....	11,720	8.50-10.70
Ordinary.....	46,867	10.25-10.75
Other lots.....	17,177	8.15-10.70
French Congo:		
Batouri.....	29,900	9.90
M'Poko.....	15,000	10.75
Soudan.....	2,710	8.50-9.50
Sangha.....	3,120	9.50
Other lots.....	2,819	8.25-11.50

## Madagascar:

Majunga.....	5,676	6.25-8.00
Tamatave.....	700	8.50
East Coast.....	12,780	6.25
Sumatra.....	990	6.00
Mexico.....	187	5.75
Total weight.....	483,793	

## Belgian Official Statistics (Special Commerce).

IMPORTS OF RAW CAOUTCHOUC (KILOGRAMS).			
FROM	1902.	1903.	1904.
Congo Free State.....	5,692,156	5,917,156	5,596,426
France.....	616,054	458,330	395,105
Great Britain.....	384,465	405,776	316,628
Netherlands.....	158,278	108,281	254,708
Germany.....	132,252	167,565	194,729
Hamburg.....	255,685	176,745	98,445
Brazil.....	259,958	14,945	33,255
Portugal.....	31,246	20,698	41,500
Other countries .....	622,543	431,497	267,520
Total.....	8,161,497	7,700,797	7,215,990

EXPORTS OF RAW CAOUTCHOUC (KILOGRAMS).			
TO	1902.	1903.	1904.
United States.....	2,427,467	2,617,629	1,881,750
Hamburg.....	1,229,373	1,078,350	1,036,576
Great Britain.....	555,731	570,513	845,566
Germany.....	1,000,506	879,391	728,084
France .....	619,407	539,245	395,061
Netherlands.....	1,054,609	485,070	535,278
Russia.....	369,033	266,110	347,896
Other countries.....	153,754	134,160	136,129
Total.....	7,409,680	6,390,468	5,904,120

ANTWERP IMPORTS OF RUBBER.			
YEAR.	Congo State.	Other Sources.	Total.
1896.....	kilos 1,106,375	9,500	1,115,875
1897.....	1,557,861	121,293	1,679,154
1898.....	1,734,305	280,280	2,014,591
1899.....	2,992,414	410,416	3,402,880
1900.....	4,902,003	706,032	5,698,035
1901.....	5,417,450	431,740	5,849,202
1902.....	4,972,954	411,031	5,403,985
1903.....	5,180,401	546,082	5,726,483
1904.....	4,723,618	1,040,238	5,763,856

## COMPARATIVE PRICES—EXTREMES.

GRADES.	1902.	1903.	1904.
Kasai, red, I.....	7.50 - 8.75	8.75-10.75	10.12½ - 11.15
Equateur, I.....	6.80 - 8.75	8.75-10.32½	10.50 - 11.25
Lopori.....	6.80 - 8.75	8.75-10.32½	10.50 - 11.25
Uelé.....	5.42½ - 8.15	8.15-10.15	9.60 - 10.20
Aruwimi.....	5.10 - 8.15	8.15-10.15	9.60 - 10.20
Upper Congo, ordinary.....	6.65 - 7.95	7.95-10.20	10. - 10.75
Lower Congo, thimbles.....	1.70 - 4.25	4.25- 6.00	5.50 - 6.50
*Fine Pará.....	2.11 - 3.43	3.43- 4.58	3.11 - 5.50

[\* In English money, per Pound.]

[In francs per kilogram and cents per Pound.]

## ANTWERP RUBBER STATISTICS FOR DECEMBER.

DETAILS.	1904.	1903.	1902.	1901.	1900.
Stocks, Nov. 30 kilos	611,726	680,142	185,961	843,301	1,064,646
Arrivals in Dec.....	581,844	638,158	799,236	204,920	170,135
Other sources.....	599,945	599,945	187,000	187,000	187,000
Aggregating.....	1,193,570	1,318,300	985,197	1,048,221	1,234,781
Sales in December.....	652,209	707,440	327,092	633,512	620,742
Stocks, Dec. 31.....	541,361	610,900	658,105	414,709	614,030
Arrivals since Jan. 1	5,763,856	5,403,985	5,849,202	5,698,035	
Other sorts.....	4,723,618	5,180,401	4,972,954	4,902,003	
Sales since Jan. 1.....	5,833,395	5,773,668	5,160,589	6,048,442	5,375,987

## RUBBER ARRIVALS AT ANTWERP.

DEC. 19.—By the *Leopoldville*, from the Congo:

Bunge & Co.....(Société Générale Africaine) kilos	106,000	
Do.....(Komité Special Katanga)	10,000	
Do.....(Société Anversoise)	1,000	
Do.....(Chemins de fer Grand Lacs)	1,000	
Do.....(Cie. du Kasai)	68,000	
Do.....(Sultanats du Haut Obangi)	17,000	
Do.....(Société de la Sangha Equatoriale)	900	
Société A B I R.....	23,000	
Comptoir Commercial Congolais.....	1,000	
Comptoir Commercial Anversoise.....(Société Ibenga)	500	
M. S. Cols.....(M. d'Heygere)	2,000	
Do.....(Société Baniembe)	1,000	
Cie. Commerciale des Colonies.....(La Haut Sangha)	18,000	
Société Coloniale Anversoise (Belge du Haute Congo)	5,000	
Do.....(Cie. Française du Haut Congo)	13,000	
Charles Dethier.....(La M'Poko)	15,000	
Société Générale de Commerce.....(La Lobay)	3,000	
Comptoir des Produits Coloniaux.....		
Do.....(Société "N'Goko" Sangha)	5,000	
Comptoir des Produits Coloniaux.....		
Do.....(Ekela Kadei Sangha)	7,000	333,400

JAN. 10.—By the *Philippeville*, from the Congo:

Bunge & Co.....(Société Générale Africaine) kilos	123,000	
Do.....(Société Isangi)	7,000	
Société Equatoriale Congolaise.....(Société l'Ikelemba)	2,000	
Charles Dethier.....(Société Belgika)	800	
Do.....	1,000	
Société Coloniale Anversoise.....(Cie. du Kasai)	57,000	
Do.....(Belge du Haut Congo)	9,000	
Do.....(Sud Kamerun)	4,600	
Société A B I R.....	71,000	
G. & C. Kreglinger.....(La Lobay)	2,000	
M. S. Cols.....Société l'Ikelemba)	500	277,900

**Hamburg.**

THE London house of Alden, Symington & Co., India-rubber merchants, have opened a branch house, under the style of ALDEN, SYMINGTON & CO., HAMBURGER FILIALE, at 28, Bergstrasse, Hamburg. Messrs. F. T. Cole and Ernest Eggers will sign jointly for procuration. This firm is in interest with the New York Commercial Co., George A. Alden & Co. (Boston), and Adelbert H. Alden (Pará and Manáos).

**Liverpool.**

EDMUND SCHLÜTER &amp; Co. report [December 31]:

The present tendency of the Brazil market is in favor of buyers—based on anticipation of larger arrivals and thus a moderate decline is possible—but it must be borne in mind that there is still no accumulation of unsold supplies and that in particular the large American purchases have left comparatively little rubber for Europe. Brazil advices speak of an ultimate crop not exceeding the 1903-4 season to any remarkable excess.—The visible supply of Pará grades on December 31 was:

	1900.	1901.	1902.	1903.	1904.
Tons.....	3287	4219	4444	3365	3351
					2046

EDMUND SCHLÜTER & Co., (London & Liverpool) have favored us with their chart of "Annual India-Rubber Statistics" for 1904, showing not only the fluctuations in prices of the leading grades, but also the London and Liverpool stocks of rubber of all kinds at the end of each month, not only for 1904 but for the four years preceding. There is given also a detailed statement of the visible supplies of Pará rubber at the end of each month since the beginning of 1900. The chart is mounted for convenient use in the counting house of the rubber man.

**Rubber Scrap Prices.**

NEW YORK quotations—prices paid by consumers for car load lots, in cents per pound—show no change since the last report beyond a slight advance on domestic shoes:

Old Rubber Boots and Shoes—Domestic.....	6½ @ 6¾
Do.....—Foreign.....	5½ @ 5¾
Pneumatic Bicycle Tires.....	3½ @ 4
Solid Rubber Wagon and Carriage Tires.....	6
White Trimmed Rubber.....	8½ @ 8¾
Heavy Black Rubber.....	4
Air Brake Hose.....	2½ @ 2¾
Fire and Large Hose.....	2 @ 2¼
Garden Hose.....	1¾ @ 1¾
Matting.....	¾ @ 1

**London.**

EDWARD TILL &amp; Co. [December 31] report stocks:

	1901	1902
Pará sorts.....tons	—	—
Borneo.....	16	32
Assam and Rangoon.....	2	4
Penang.....	254	—
Other sorts.....	432	224
Total.....	651	260
	1511	1552
LIVERPOOL.....	177	546
Caucho.....	30	45
Other sorts.....	614	111
Total, United Kingdom.....	1511	1552

## PRICES PAID DURING DECEMBER.

	1904.	1901.	1902.
Pará fine, hard..	5/ @5/ 5½ 3/10¾ @4/ 1	3 1½ @ 3 1/10	
Do soft.....	4/10 @4 4 3 9 1 13 11	3 1½ @ 3 1/10	
Negroheads, scrappy.....	3/ 9 1/10 @ 3 11 3 2 3/4 @ 3 3 1/2	2 0 1 3/4 1	
Do Cameta.....	2/ 9 @ 2 10 1/2 2 4 @ 2 5 1/2	2 1 3/4 @ 2 6	
Bolivian.....	5/ 2 @ 5 5 1/2 4 1/2	3 7/8 @ 3 10	
Caucho, ball.....	3/ 4 @ 3 5 1/2 3 3 @ 3 4	2 8 1/2 @ 3 1	
Do slab.....	No sales	2/ 7 @ 2 5	
Do tails.....	3/ No sales	2/9	

JANUARY 13.—The market has had a sharp reaction, and prices for hard fine have advanced 2½¢d. per lb. Sales have been made: Hard fine January delivery up to 5s. 2½¢d., sellers now at 5s. 3d., ditto February-March a moderate business up to 5s. 1¾¢d. Soft fine spot at 4s. 11½¢d. and further buyers. Negroheads: Scrappy rather buyers at 3s. 9½¢d. and Cametas at 2s. 9½¢d. Caucho Ball, small sales forward at 3s. 3½¢d. Peruvian: Sales of fine per Javary at 5s. 1d. to 5s. 2d. Scrappy negro-heads at 3s. 8d., and ball 3s. 3½¢d. to 3s. 3¾¢d. The demand is good for medium kinds, and a considerable business done at firm prices, including Mattogrosso virgin at 4s. 5d. to 4s. 5½¢d. per lb. There are no auctions here to-day.

## PLANTATION RUBBER (FROM PARA SEED).

January 6 Auction.—Ceylon and Straits: Fifty packages sold; biscuits, dull to fine yellow, 5s. 11d. to 6s.; good scrap 4s. 3d. @ 4s. 7d. mixed lots 3s. 6d. to 4s.

January 13.—Sales reported during the week of Ceylon and Straits fine biscuits at 6s. 1d. [= \$1.48] per pound.

## ENGLAND'S IMPORTS FOR THREE YEARS IN DETAIL.

	1901.	1902.	1904.
Pará sorts.....tons	10,296	10,630	8,568
Peruvian.....	1,412	2,216	2,582
Mollendo.....	194	148	244
Central America, Ceará and Pernambuco.....	1,250	1,748	2,104
West Coast African.....	3,274	3,870	5,144
Zanzibar and Mozambique.....	216	213	197
Madagascar.....	29	83	159
Rangoon and Assam.....	47	88	164
Borneo.....	67	101	121
Penang.....	104	296	599
Various.....	16	1	1
Total.....tons	16,932	19,464	19,883

S. FIGGIS & Co., in their annual review of the rubber market for 1904, describe the year as one of activity, with rapid fluctuations in prices. Consumption continued on a large scale, and the supply of fine rubber was not equal to the demand. "Bear" selling resulted frequently in a corner, and extravagant prices for "spot and near" rubber, and this forced up the price of fine rubber out of proportion to other sorts. But the world's consumption of fine has practically left no stock of this class of rubber for months past. The visible supply fell to an unprecedentedly low point.

In their preceding annual report reference was made to larger receipts of Medium sorts than for some years past. Still larger figures are to be reported for the year just closed. There have been increases in Peruvian Caucho ball and slab, Mançoba and Mangabeira, all of which sorts show an improvement. Central American rubbers also reached England more freely.

The West Coast African production was larger than for several years



past. First A and produced about the same quantity. Madagascar increased its supply, especially of recent months, but scarcely any was fine pinky; prices moderate for most other descriptions.

*Balata* has been in greatly reduced demand till recently, and declined considerably. Block sold down to 2s. 2d., closing at 1s. 5d.; fine Sheet down to 1s. 8½d., closing at 1s. 11d. The supply is likely to be considerably less, and stocks are moderate.

*Gutta-percha*.—Demand has been very small. Some has sold at considerably lower prices and old lots difficult to dispose of.

### British Official Returns.

#### INDIA RUBBER.

	1902.	1903.	1904.
Imports.....	19,470,000	54,411,700	58,857,152
Exports.....	32,070,112	37,088,708	33,415,536

Net Imports.....	14,293,888	16,784,992	22,141,616
Value of Imports.....	8,150,268	27,122,976	27,098,710
Value of Exports.....	3,551,866	4,928,488	5,022,222

Value Net Imports.....	11,029,102	21,814,478	22,076,488
Av. value Imports per pound.....	2s. 2½d.	2s. 5½d.	2s. 6½d.

On inspection of the above figures, it is seen that only a slight increase in the quantity of imports of rubber has taken place in 1904, but only a slight decrease in the value of imports, while the value of exports has increased.

#### GUTTA PERCHA.

	1902.	1903.	1904.
Imports.....	9,395,568	5,198,032	3,056,256
Exports.....	1,190,784	741,604	890,624

Net Imports.....	8,204,784	4,456,368	2,165,632
Value of Imports.....	1,150,702	2,587,712	2,285,535
Value of Exports.....	135,514	61,916	100,471

Value Net Imports.....	1,015,188	2,525,796	2,185,064
Av. value Imports per pound.....	2s. 5½d.	2s. 2½d.	1s. 8½d.

### Para.

LATE mail advices state: "The market has generally been firm, and although the demand has not been animated, there has been sufficient inclination to buy to impart strength to values, which with reference to Islands descriptions show a moderate advance, whilst the larger arrivals at Manáos have had a contrary effect on Upriver kinds."

In relation to the measure at one time proposed at Pará, to levy a prohibitive tax upon Cameté rubber—mentioned some time ago in this Journal—Messrs. Kanthack & Co. (Pará) advise THE INDIA RUBBER WORLD, as follows:

The government after investigation has abandoned the idea, being convinced that the districts now producing Cameté are incapable of producing fine, owing to the damage to the trees so lucidly explained by your correspondent. As to your correspondent's belief that complete rest would restore their milk giving power to such worn out trees, we are unable to hazard an opinion.

#### EXPORTS FROM PARA FOR TEN YEARS.

(Average Exports of 10 Years.)

YEARS.	United States.	Europe.	Total.	1904.
1904.....	16,309,468	14,334,668	30,644,136	279,000
1903.....	15,335,300	16,061,547	31,096,847	1,298,000
1902.....	13,859,868	14,689,912	28,549,780	1,092,000
1901.....	11,550,788	14,771,200	30,290,498	1,313,000
1900.....	12,434,667	14,418,777	26,748,663	931,000
1899.....	13,875,318	12,311,771	25,413,709	901,000
1898.....	9,830,265	12,078,742	21,909,007	1,336,000
1897.....	12,620,858	10,915,464	22,536,322	943,000
1896.....	9,045,450	12,556,424	21,601,874	1,062,000
1895.....	11,251,410	10,417,171	20,769,581	687,000

### PARA RUBBER VIA EUROPE.

DECEMBER 24.—By the <i>Comet</i> —Liverpool:	
New York Commercial Co. (Fine).....	11,500
Poel & Arnold (Coarse).....	35,000
A. T. Morse & Co. (Coarse).....	48,000

JAN. 2.—By the <i>Charlie</i> —Liverpool:	
Poel & Arnold (Coarse).....	11,500
JAN. 4.—By the <i>Comet</i> —Liverpool:	
A. T. Morse & Co. (Coarse).....	11,500
JAN. 7.—By the <i>Comet</i> —Liverpool:	
Chicago River & Harbor Co. (Coarse).....	11,500
Chicago River & Harbor Co. (Coarse).....	11,500

JAN. 11.—By the <i>Arctia</i> —Liverpool:	
Poel & Arnold (Fine).....	11,500
JAN. 14.—By the <i>Comet</i> —Liverpool:	
Poel & Arnold (Coarse).....	35,000
New York Commercial Co. (Fine).....	48,000

### Rubber Receipts at Manaos.

DURING December and six months of the crop season for three years [courtesy of Messrs. Witt & Co.]:

	1901.	1902.	1903.	1904.
Rio Paraíso—Acro.....	315	588	467	2000
Rio Madeira.....	137	330	106	1686
Rio Juary—Iquitos.....	810	553	337	1184
Rio Juary—Iquitos.....	658	375	441	1816
Rio São José.....	176	160	321	434
Rio Negro.....	142	105	109	175
Total.....	2247	2117	1541	7304
Caucho.....	192	428	185	650
Total.....	2439	2545	1720	7954

#### MANAOS RUBBER EXPORTS, 1904 (KILOGRAMS).

To—	Fine.	Medium.	Coarse.	Caucho.	Total.
New York.....	1,477,113	1,347,640	1,132,054	9,048,174	9,048,174
Liverpool.....	2,743,798	454,277	706,751	1,901,808	5,806,634
Havre, Hamburg, Antwerp.....	1,542,015	175,626	321,804	544,143	2,583,588
Total.....	9,676,200	1,807,096	2,376,195	3,578,905	17,438,396

#### LOUITOS RUBBER EXPORTS, 1904.

(Average Exports of 10 Years.)

To—	Fine.	Medium.	Coarse.	Caucho.	Total.
New York.....	10,000	0	0	3,850	30,171
Liverpool.....	526,770	144,138	703,890	401,533	1,236,331
Havre, Hamburg, Antwerp.....	259,453	24,614	107,951	252,081	644,099
Total.....	806,183	168,752	278,193	657,473	1,910,601

### IMPORTS FROM PARA AT NEW YORK.

[The Figures Indicate Weights in Pounds.]

#### January 6.—By the steamer *Boniface*, from Manáos and Pará:

IMPORTERS	Fine.	Medium.	Coarse.	Caucho.	Total.
Poel & Arnold.....	279,700	68,400	197,000	2,500	547,600
New York Commercial Co.....	229,400	58,000	138,600	1,000	427,000
General Rubber Co.....	169,100	36,800	151,000	400	357,300
A. T. Morse & Co.....	142,500	28,400	117,600	2,100	290,600
Edmund Reeks & Co.....	39,500	14,000	22,600	600	76,700
Hagemeyer & Brunn.....	28,100	2,400	1,700	.....	32,200
Lionel Hagenaers & Co.....	19,500	.....	4,700	.....	24,200
Thomsen & Co.....	6,400	.....	11,000	.....	17,400

Total..... 914,200 208,900 644,200 6,600=1,773,900

#### January 14.—By the steamer *Cavense*, from Manáos and Pará:

Poel & Arnold.....	177,200	53,400	121,600	11,100	363,300
General Rubber Co.....	238,300	38,000	58,000	1,400	335,700
New York Commercial Co.....	145,700	35,300	107,700	5,600	294,300
A. T. Morse & Co.....	173,700	23,000	88,500	6,200	291,400
Lawrence Johnson & Co.....	21,000	6,000	7,800	.....	34,800
Edmund Reeks & Co.....	12,700	1,300	14,700	4,500	33,200
Lionel Hagenaers & Co.....	13,700	.....	3,100	.....	16,800
Hagemeyer & Brunn.....	4,400	.....	10,700	.....	15,100
G. Amsinck & Co.....	300	.....	3,800	.....	4,100

Total..... 787,000 157,000 415,900 28,800=1,388,700

#### January 26.—By the steamer *Grangense*, from Manáos and Pará:

General Rubber Co.....	243,400	46,000	107,700	1,000	398,100
New York Commercial Co.....	155,800	49,100	77,000	.....	281,900
Poel & Arnold.....	124,700	37,800	116,300	12,700	291,500
A. T. Morse & Co.....	149,600	25,500	114,700	48,000	337,800
Hagemeyer & Brunn.....	24,900	2,000	4,300	.....	31,200
Edmund Reeks & Co.....	21,300	3,000	3,800	.....	28,100
Lionel Hagenaers & Co.....	18,900	.....	3,900	.....	22,800
Thomsen & Co.....	13,000	.....	4,600	.....	17,600
Czarinkow, McDougal & Co.....	12,600	1,800	700	.....	15,100
G. Amsinck & Co.....	11,300	5,600	2,200	.....	19,100

Total..... 775,500 170,800 435,200 61,700=1,443,200

Note: The steamer *Grangense* is due at New York on February 1st.

## OTHER ARRIVALS IN NEW YORK

## CENTRAIS.

CENTRAIS.		FOURTEEN
DEC. 24.—By the <i>Santiago</i> =Mexico:		
George A. Alden & Co.	17,000	
Graham, Hinkley & Co.	200	
L. N. Chemedin & Co.	500	
H. Marquardt & Co.	700	18,000
DEC. 27.—By the <i>Columbus</i> =Bahia:		
J. H. Roszbach & Bros.	12,500	
A. D. Hitch & Co.	3,000	10,000
DEC. 27.—By the <i>Fluminense</i> =Ceara:		
Emile Boris	15,000	
DEC. 27.—By the <i>Comus</i> =New Orleans:		
A. T. Morse & Co.	7,500	
Eggers & Heinlein	4,000	
A. N. Rotholz	2,000	
Andrews & Co.	1,000	15,000
DEC. 29.—By the <i>Alliance</i> =Colon:		
G. Amstutz & Co.	12,300	
Hirzel, Feltman & Co.	4,000	
Gabriel Perigault	3,800	
J. A. Medina & Co.	2,000	
Fidancie Bros. & Co.	1,200	
A. Rosenthal's Sons	1,000	
Smithers, Nordenholt & Co.	800	
E. E. Strout	700	
Pedro A. Lopez	700	
Isaac Brandon & Bros.	700	
Kunhardt & Co.	400	27,000
JAN. 3.—By the <i>Pretoria</i> =Hamburg:		
Geo. A. Alden & Co.	30,000	
J. H. Roszbach & Bros.	24,000	52,000
JAN. 3.—By the <i>Monterey</i> =Mexico:		
Aug. Strube & Co.	4,500	
Harburger & Staack	3,000	
H. Marquardt & Co.	2,000	
E. Steigel & Co.	800	
E. N. Tibbals & Co.	700	10,000
JAN. 3.—By the <i>Menachetes</i> =Friedland:		
Thebaud Brothers	3,500	
JAN. 3.—By the <i>Siberia</i> =Carthagena:		
Sperling & Williams	3,000	
A. Held	3,000	
T. Hanneburg	1,500	
Kunhardt & Co.	1,500	
D. A. De Lima & Co.	700	
Isaac Brandon & Bros.	500	10,200
JAN. 4.—By the <i>Ivernia</i> =Liverpool:		
Hirsch & Kaiser	11,000	
J. H. Roszbach & Bros.	10,000	21,000
JAN. 5.—By the <i>Graf Waldersee</i> =Hamburg:		
George A. Alden & Co.	6,000	
Rubber Trading Co.	3,000	9,000
JAN. 5.—By the <i>Advance</i> =Colon:		
Hirzel, Feltman & Co.	14,000	
A. Santos & Co.	7,100	
J. A. Medina & Co.	6,800	
Dumarest Bros. & Co.	5,400	
Piza, Nephews & Co.	5,000	
G. Amstutz & Co.	4,400	
Lawrence Johnson & Co.	4,400	
A. M. Capen's Sons	3,500	
Kunhardt & Co.	3,400	
Gabriel Perigault	2,400	
American Trading Co.	3,100	
Moeke & Co.	2,500	
Isaac Brandon & Bros.	2,200	
E. E. Strout	1,900	
Roldan & Van Sickle	1,100	
Lannan & Kemp	1,400	
Silva, Bussendus & Co.	900	
Eggers & Heinlein	900	71,800
JAN. 6.—By the <i>Filion</i> =Bahia:		
J. H. Roszbach & Bros.	20,000	
Hirsch & Kaiser	12,000	41,000
JAN. 10.—By the <i>Munchacha</i> =London:		
Poel & Arnold	15,000	
A. T. Morse & Co.	5,500	20,500
JAN. 9.—By the <i>El Siglo</i> =New Orleans:		
A. N. Rotholz	5,500	
Mannhattan Rubber Mfg. Co.	5,500	
A. T. Morse & Co.	2,500	13,500
JAN. 10.—By the <i>Alba</i> =Carthagena:		
A. T. Hanneburg	3,200	
G. Amstutz & Co.	1,500	
Banco de Exportasos	700	
D. A. De Lima & Co.	500	5,900
JAN. 11.—By the <i>City of Washington</i> =Colon:		
Hirzel, Feltman & Co.	7,100	
Gabriel Perigault	6,400	
E. E. Strout	5,000	
Silva, Bussendus & Co.	1,000	
A. Rosenthal's Sons	1,000	
A. N. Rotholz	500	21,000

## CENTRAIS—Continued.

JAN. 11.—By the <i>Magdalen</i> =Liverpool:	
Emile Boris	1,000
Wallace L. Gough	4,000
JAN. 16.—By the <i>Matacas</i> =Mexico:	
George A. Alden & Co.	15,000
H. Marquardt & Co.	3,200
L. N. Tibbals & Co.	1,000
E. Steigel & Co.	600
Graham Hinkley & Co.	600
Isaac Kubie & Co.	500
JAN. 18.—By the <i>Sirina</i> =Greystown, etc.:	
G. Amstutz & Co.	7,000
A. A. Lindo & Co.	1,000
A. Held	2,000
Pedro A. Lopez	800
Isaac Brandon & Bros.	500
JAN. 18.—By the <i>Sequana</i> =Colon:	
Hirzel, Feltman & Co.	20,500
Dumarest Bros. & Co.	11,000
J. A. Medina & Co.	13,000
G. Amstutz & Co.	11,000
Gabriel Perigault	5,800
Lawrence Johnson & Co.	4,000
Roldan & Van Sickle	3,100
H. B. Chaffin & Co.	2,500
American Trading Co.	1,400
Eggers & Heinlein	1,300
A. Santos & Co.	900
H. W. Peabody & Co.	700
JAN. 23.—By the <i>El Monte</i> =New Orleans:	
A. T. Morse & Co.	7,500
G. Amstutz & Co.	7,500
A. N. Rotholz	4,500
Eggers & Heinlein	1,500
Mannhattan Rubber Mfg. Co.	1,000
JAN. 24.—By the <i>Havana</i> =Mexico:	
Strube & Utze	2,000
Harburger & Staack	1,500
H. Marquardt & Co.	1,500
E. Steigel & Co.	1,500
Thebaud Brothers	1,000
Joseph Ware	500
James Bondy & Sons	500
Graham, Hinkley & Co.	500

## AFRICANS.

AFRICANS.		FOURTEEN
DEC. 24.—By the <i>Campana</i> =Liverpool:		
George A. Alden & Co.	30,000	
Rubber Trading Co.	15,000	45,000
DEC. 27.—By the <i>Patriot</i> =Hamburg:		
A. T. Morse & Co.	23,000	
George A. Alden & Co.	8,000	
Poel & Arnold	9,000	
Rubber Trading Co.	7,000	48,000
DEC. 27.—By the <i>Vaderland</i> =Antwerp:		
Poel & Arnold	65,000	
DEC. 28.—By the <i>Sloterdijk</i> =Rotterdam:		
Poel & Arnold	40,000	
JAN. 3.—By the <i>Pretoria</i> =Hamburg:		
A. T. Morse & Co.	56,000	
George A. Alden & Co.	15,000	
Rubber Trading Co.	7,000	78,000
JAN. 3.—By the <i>Cabrie</i> =Liverpool:		
A. T. Morse & Co.	34,000	
JAN. 4.—By the <i>Ivernia</i> =Liverpool:		
General Rubber Co.	53,000	
George A. Alden & Co.	45,000	
Poel & Arnold	12,000	
Wallace L. Gough	7,000	120,000
JAN. 5.—By the <i>Teutonic</i> =Liverpool:		
Poel & Arnold	12,000	
A. T. Morse & Co.	10,000	22,000
JAN. 5.—By the <i>Cassell</i> =Bremen:		
General Rubber Co.	90,000	
JAN. 5.—By the <i>Graf H. von Bismarck</i> =Hamburg:		
A. T. Morse & Co.	115,000	
George A. Alden & Co.	30,000	145,000
JAN. 7.—By the <i>Lucania</i> =Liverpool:		
General Rubber Co.	34,000	
JAN. 9.—By the <i>Europe</i> =Antwerp:		
George A. Alden & Co.	245,000	
Joseph Cantor	6,000	
Poel & Arnold	7,000	
Robinson & Tallman	22,000	350,000
JAN. 10.—By the <i>Blucher</i> =Hamburg:		
Poel & Arnold	15,000	
A. T. Morse & Co.	22,000	
George A. Alden & Co.	15,000	
Rubber Trading Co.	12,000	64,000
JAN. 11.—By the <i>Amsterdam</i> =Rotterdam:		
Poel & Arnold	15,000	

## AFRICANS—Continued.

JAN. 11.—By the <i>Amsterdam</i> =Rotterdam:	
Poel & Arnold	15,000
A. T. Morse & Co.	4,000
George A. Alden & Co.	4,000
General Rubber Co.	4,000
Joseph Cantor	4,000
JAN. 16.—By the <i>Europe</i> =Liverpool:	
Wallace L. Gough	34,000
General Rubber Co.	15,000
Poel & Arnold	4,000
JAN. 16.—By the <i>Carthage</i> =Havre:	
George A. Alden & Co.	22,000
JAN. 18.—By the <i>Deland</i> =Antwerp:	
Poel & Arnold	9,000
JAN. 19.—By the <i>Bowie</i> =Liverpool:	
Poel & Arnold	22,000
JAN. 21.—By the <i>Arable</i> =Liverpool:	
A. T. Morse & Co.	22,500
Henry A. Gould Co.	2,500
JAN. 23.—By the <i>Campana</i> =Liverpool:	
General Rubber Co.	45,000
George A. Alden & Co.	5,000
JAN. 23.—By the <i>Pennsylvania</i> =Hamburg:	
A. T. Morse & Co.	20,000
Rubber Trading Co.	5,000
George A. Alden & Co.	3,000

## EAST INDIAN.

EAST INDIAN.		FOURTEEN
DEC. 24.—By the <i>Munchacha</i> =London:		
Poel & Arnold	88,000	
D. A. Shaw & Co.	11,000	99,000
JAN. 4.—By the <i>Eastern Prince</i> =Singapore:		
Hagemeyer & Braum	20,000	
Poel & Arnold	10,000	30,000
JAN. 7.—By the <i>Claverburn</i> =Singapore:		
Robert Brauns & Co.	25,000	
Winter & Smilie	15,000	40,000
JAN. 10.—By the <i>Munchacha</i> =London:		
Poel & Arnold	35,000	
Robert Brauns & Co.	20,000	
George A. Alden & Co.	5,000	60,000
JAN. 10.—By the <i>Drachentel</i> =Ceylon:		
Winter & Smilie	1,500	
JAN. 23.—By the <i>St. Louis</i> =London:		
A. T. Morse & Co.	10,000	
Poel & Arnold	6,000	16,000

## GUTTA PERCHA.

JAN. 4.—By the <i>African Prince</i> =Singapore:	
Poel & Arnold	100,000
JAN. 7.—By the <i>Claverburn</i> =Singapore:	
George A. Alden & Co.	200,000
J. H. Reeknapel & Sons	140,000
Winter & Smilie	140,000

## GUTTA PERCHA AND BALATA.

GUTTA PERCHA AND BALATA.		FOURTEEN
JAN. 3.—By the <i>Pretoria</i> =Hamburg:		
To Order	7,000	
JAN. 7.—By the <i>Claverburn</i> =Singapore:		
Winter & Smilie	3,000	
JAN. 10.—By the <i>Blucher</i> =Hamburg:		
To Order	6,000	
JAN. 24.—By the <i>Carthage</i> =Demerara:		
Charles F. Shilstone	900	
Otto Helnze & Co.	1,500	2,400
JAN. 3.—By the <i>Menachetes</i> =United Port:		
Middleton & Co.	3,700	
Frank & Co.	2,300	
For Europe	44,500	50,500
JAN. 13.—By the <i>Bancu</i> =Cuidad Bolivar:		
For Europe	70,000	

## CUSTOM HOUSE STATISTICS.

PORT OF NEW YORK—DECEMBER 1904.		IMPORTS	EXPORTS
Imports:			
India-rubber	6,028,361	\$5,100,463	
Gutta-percha			
Gutta-jelutong (Pontianak)	360,552		
Total			
Exports:			
India-rubber			
Reclaimed rubber	145,880		21,763
Rubber Scrap Imported	946,933		\$58,427



## BOSTON ARRIVALS.

		Dec. 10.—By the <i>Canadian</i> —Liverpool:		Dec. 27.—By the <i>Sagamore</i> —Liverpool:	
Dec. 8.—By the <i>Empire</i> —London:		George A. Alden & Co.—African.	38,800	Poel & Arnold.—African.....	17,138
George A. Alden & Co.—Central.	1,040	George A. Alden & Co.—Central.	42,000	Dec. 21.—By the <i>Winfredian</i> —Liverpool:	
Dec. 9.—By the <i>Sagamore</i> —Liverpool:		Dec. 12.—By the <i>Empire</i> —London:		Poel & Arnold.—African.....	3,590
George A. Alden & Co.—Central.	6,140	George A. Alden & Co.—East Indian.	5,059	Dec. 27.—By the <i>Cambrian</i> —London:	
Dec. 9.—By the <i>Sagamore</i> —Liverpool:		Dec. 17.—By the <i>Adria</i> —Hamburg:		George A. Alden & Co.—East Indian.	4,726
Poel & Arnold.—African.....	9,848	George A. Alden & Co.—Central.	38,192	Dec. 27.—By the <i>Sagamore</i> —Liverpool:	
Dec. 9.—By the <i>Canadian</i> —Liverpool:		Dec. 25.—By the <i>Sachsen</i> —Liverpool:		George A. Alden & Co.—African.....	4,629
George A. Alden & Co.—African.....	2,140	George A. Alden & Co.—African.....	19,387	Total .....	241,636
				[Value, \$141,208.]	

## EXPORTS OF INDIA-RUBBER FROM PARA AND MANAOS DURING 1904 (KILOGRAMS).

EXPORTERS.	UNITED STATES.					EUROPE.					TOTAL
	FINE.	MEDIUM.	COARSE.	CAUCHO.	TOTAL.	FINE.	MEDIUM.	COARSE.	CAUCHO.	TOTAL.	
Cmok, Schrader & Co..... } Dusendschön & Co.—Manãos }	2,269,619	511,862	1,531,460	367,683	4,680,624	2,842,576	279,625	802,145	1,156,389	5,080,735	9,761,359
Adelbert H. Alden.....	1,781,550	391,497	1,245,219	35,884	3,424,150	1,240,176	162,582	270,177	216,917	1,889,852	5,314,002
Witt & Co.....	1,850,834	389,313	425,987	363,196	3,029,330	681,053	90,566	171,887	561,855	1,505,361	4,534,691
Da Costa & Co.....	625,077	83,146	1,126,087	18,278	2,152,588	609,568	47,616	432,152	28,770	1,118,106	3,270,694
Neale & Staats.....	518,831	89,288	334,418	110,304	1,057,841	305,050	32,733	93,774	146,461	578,018	1,635,859
Reeks & Aslett.....	390,093	80,352	106,453	234,611	811,509	5,088	3,856	7,055	32,148	48,147	859,656
J. Marques & Co.....	166,162	3,855	122,315	—	292,332	335,458	7,588	110,317	7,605	460,968	753,300
J. H. Andresen, Successors...	57,171	23,634	13,482	11,100	105,387	146,600	58,695	59,261	58,269	322,825	428,212
Kanthack & Co.....	103,601	27,445	32,841	47,522	211,409	104,785	22,833	56,022	38,972	222,612	433,721
R. Suarez & Co.....	35,157	11,327	1,986	—	48,470	287,889	46,121	38,328	11,515	383,853	432,323
Denis Crouan & Co.....	37,903	4,511	38,084	3,774	84,272	146,478	21,219	62,607	22,482	252,786	337,058
Singlehurst Brocklehurst & Co	22,734	3,539	28,628	—	54,892	133,426	24,391	24,725	2,574	185,116	240,008
Pires, Teixeira & Co.....	153,792	—	51,400	—	205,192	4,556	—	1,147	—	5,703	210,895
Kahn, Polack & Co.....	—	—	—	—	—	98,461	15,669	22,640	22,272	159,042	159,042
Morus & Levy.....	—	—	—	8,000	8,000	32,286	5,563	10,644	50,051	98,544	106,544
Mello & Co., em liquid.....	19,893	4,575	2,835	12,561	39,867	30,804	2,626	4,743	—	38,173	78,040
Lopes Schill & Sobrinhos.....	—	—	—	—	—	34,720	7,220	12,478	14,220	68,638	68,638
B. A. Antunes & Co.....	4,093	1,647	4,322	4,821	15,693	13,408	2,733	5,587	—	21,728	37,421
Sundry small exporters.....	11,041	4,191	17,250	1,102	63,584	27,285	5,146	11,006	49,655	993,092	156,676
From Iquitos direct.....	13,743	179	6,962	3,744	24,628	536,150	157,173	306,825	801,221	1,801,369	1,825,997
Total .....	18,062,104	1,630,355	5,304,429	1,222,580	16,309,468	7,615,817	993,955	2,503,520	3,221,376	14,334,668	30,644,136

## OFFICIAL STATISTICS OF CRUDE INDIA-RUBBER (POUNDS).

UNITED STATES.				GREAT BRITAIN.			
MONTHS.	IMPORTS.	EXPORTS.	NET IMPORTS.	MONTHS.	IMPORTS.	EXPORTS.	NET IMPORTS.
November, 1904.....	5,609,180	232,779	5,376,401	November, 1904.....	5,505,584	3,507,392	1,998,192
January-October.....	49,951,326	2,884,787	47,066,539	January-October.....	45,566,416	26,909,910	18,656,506
Eleven months, 1904.....	55,560,506	3,117,566	52,442,940	Eleven months, 1904.....	51,072,000	30,417,302	20,654,698
Eleven months, 1903.....	50,868,845	3,283,398	47,585,447	Eleven months, 1903.....	49,332,864	34,996,304	14,336,560
Eleven months, 1902.....	46,007,428	3,060,589	42,946,839	Eleven months, 1902.....	42,921,648	29,848,448	13,073,200
GERMANY.*				ITALY.			
MONTHS.	IMPORTS.	EXPORTS.	NET IMPORTS.	MONTHS.	IMPORTS.	EXPORTS.	NET IMPORTS.
November, 1904.....	3,935,580	929,040	3,006,540	November, 1904.....	120,120	28,820	91,300
January-October.....	29,682,620	7,787,786	21,894,834	January-October.....	1,269,840	103,180	1,166,660
Eleven months, 1904.....	33,617,200	8,717,720	24,900,480	Eleven months, 1904.....	1,389,960	132,000	1,257,960
Eleven months, 1903.....	31,662,900	10,387,520	20,675,380	Eleven months, 1903.....	1,351,240	148,720	1,202,520
Eleven months, 1902.....	30,874,840	12,143,460	17,440,440	Eleven months, 1902.....	1,409,540	107,360	1,302,180
FRANCE.*				AUSTRIA-HUNGARY.			
MONTHS.	IMPORTS.	EXPORTS.	NET IMPORTS.	MONTHS.	IMPORTS.	EXPORTS.	NET IMPORTS.
November, 1904.....	2,134,660	1,075,360	1,059,300	November, 1904.....	352,880	220	352,660
January-October.....	17,219,180	9,367,600	7,851,580	January-October.....	2,297,900	14,966	2,282,940
Eleven months, 1904.....	19,353,840	10,442,960	8,910,880	Eleven months, 1904.....	2,650,780	15,180	2,635,600
Eleven months, 1903.....	15,368,100	8,680,950	6,687,150	Eleven months, 1903.....	2,614,040	27,060	2,586,980
Eleven months, 1902.....	14,144,460	8,111,300	5,033,160	Eleven months, 1902.....	2,396,900	12,540	2,384,360
NET IMPORTS.				NET IMPORTS.			
MONTHS.	IMPORTS.	EXPORTS.	NET IMPORTS.	MONTHS.	IMPORTS.	EXPORTS.	NET IMPORTS.
November, 1904.....	16,468,284	14,099,978	2,368,306	November, 1904.....	16,415,274	14,433,986	1,981,288
January-October.....	14,684,980	11,747,425	2,937,555	January-October.....	14,684,980	11,747,425	2,937,555
Eleven months, 1904.....	16,468,284	14,099,978	2,368,306	Eleven months, 1904.....	16,415,274	14,433,986	1,981,288
Eleven months, 1903.....	15,368,100	8,680,950	6,687,150	Eleven months, 1903.....	15,368,100	8,680,950	6,687,150
Eleven months, 1902.....	14,144,460	8,111,300	5,033,160	Eleven months, 1902.....	14,144,460	8,111,300	5,033,160

NOTE.—German statistics include Gutta-percha, Balata, old rubber, and substitutes. French, Austrian, and Italian figures include Gutta-percha. The exports from the United States embrace the supplies for Canadian consumption.

\* General Commerce.

† Special Commerce.

‡ Net Exports.

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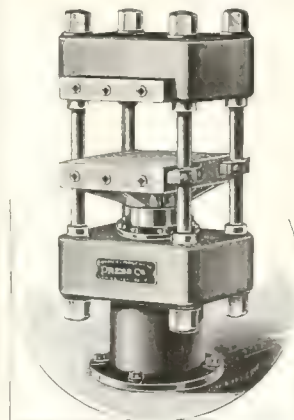
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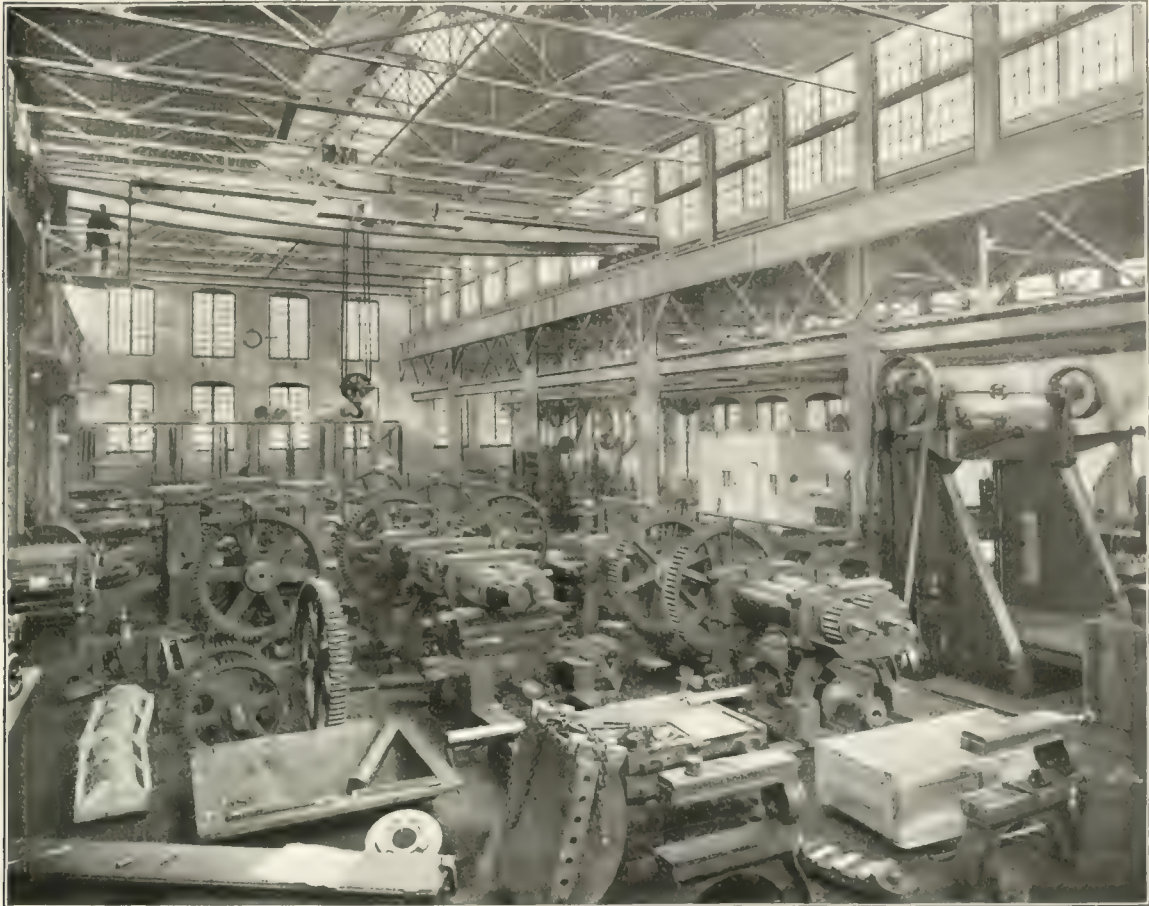
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Benzol and Coal Tar Naphtha for  
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**FLOUR SULPHUR**

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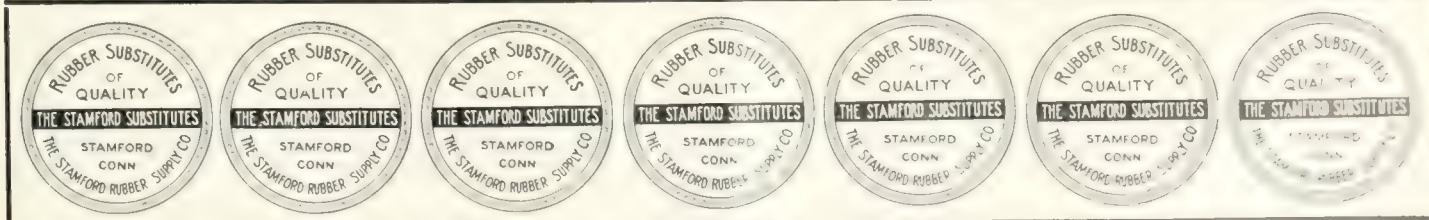
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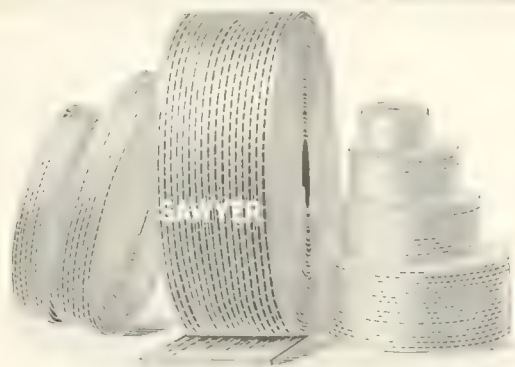
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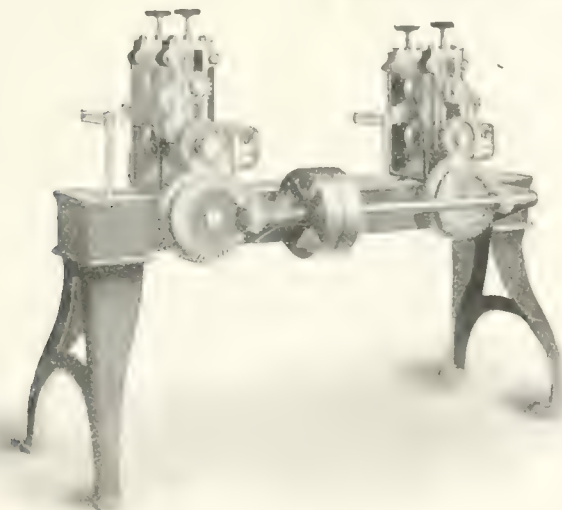
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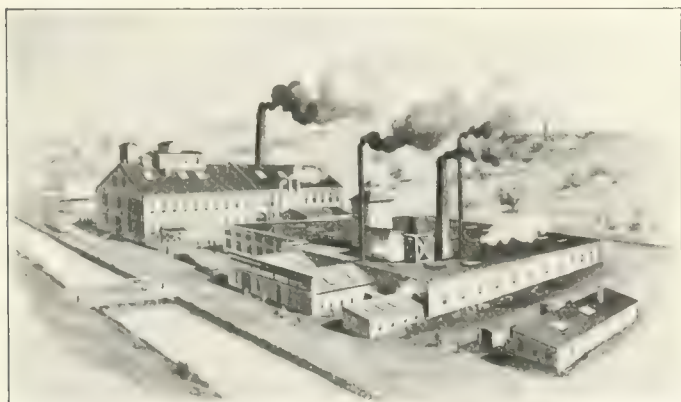
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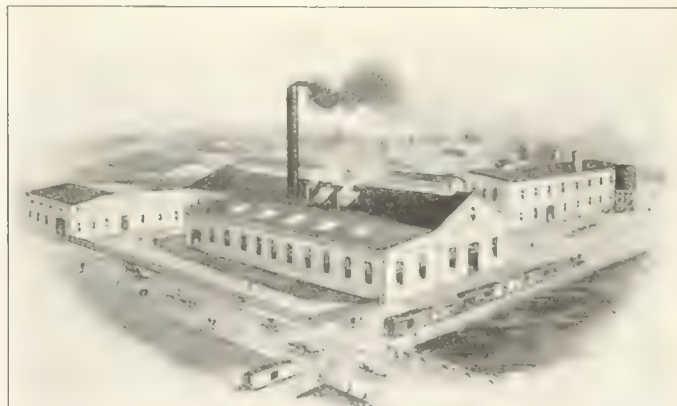
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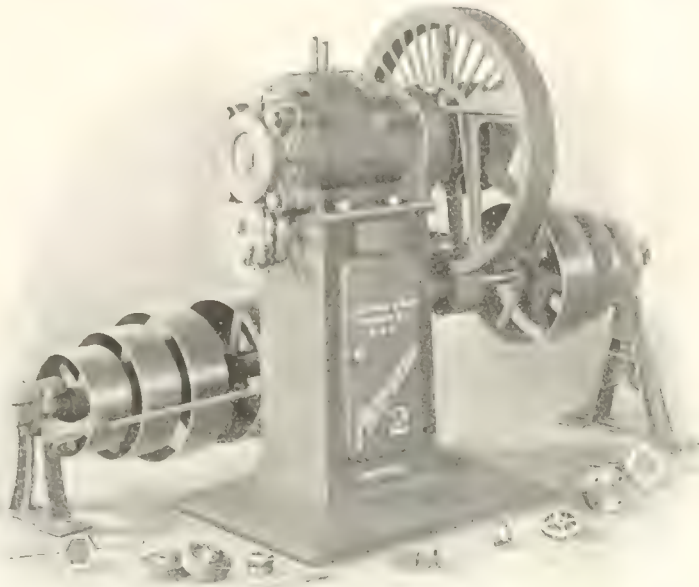
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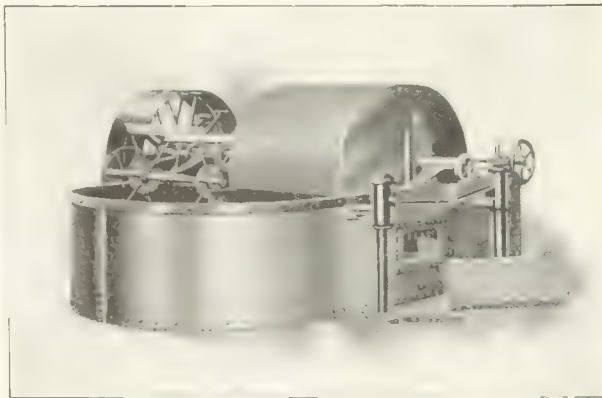
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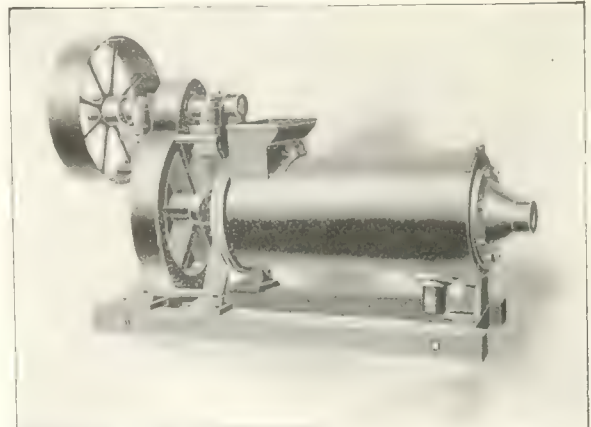
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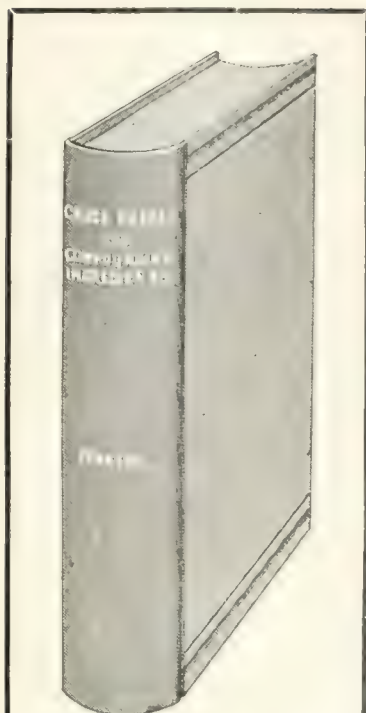


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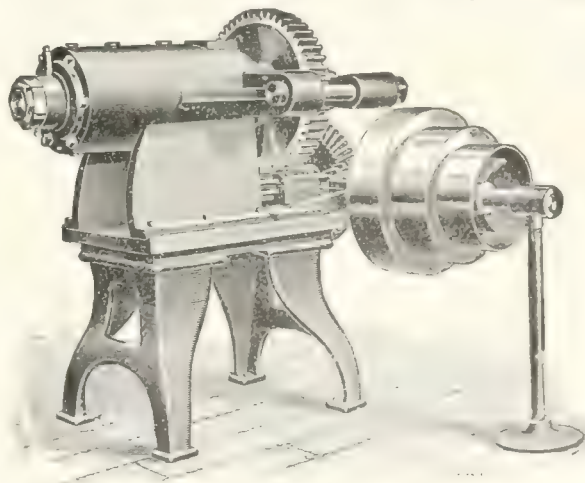
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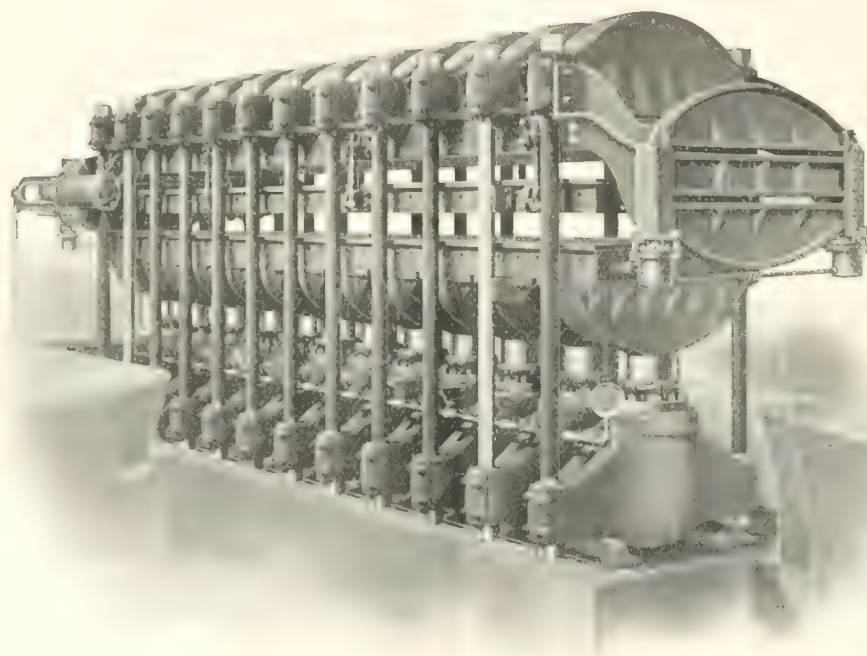
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FOR

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EMIL PASSBURG SYSTEM

The Passburg (Patent) "VACUUM DRYING APPARATUS" is no experiment.

They are installed in all of the principal rubber manufactories of Europe.

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FOR SALE.—A Farrel Washing Machine, two rolls 24" x 15", as good as new. For particulars address, MECHANICAL FABRIC CO., Providence, R. I. [720]

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IF it's about second hand Rubber Machinery, write us; if about Scrap Iron, write our competitors, as we do not buy Machinery that is unfit for use. A point to those who want to bdy: "We handle all kinds" W. C. COLEMAN CO., Setauket (Long Island), New York.

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WANTED.—A second hand 16 or 18 diameter by 42 to 48" long, chilled iron three roll Calender; also a 16 by 40 Rubber Mill, both in first class condition. Address, stating bottom cash price f. o. b. cars, and when same can be shipped. Address X. Y. Z., care of THE INDIA RUBBER WORLD. [711]

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A RUBBER RECLAIMING man who thoroughly understands the reclaiming of all kinds of Rubber Scrap, cured and uncured, also Bicycle Tires by the acid process, is looking for a change. Is prepared to install and conduct in the most economical and profitable manner, a Reclaiming Plant based on the acid process, and guarantees a superior product. Correspondence solicited from parties desiring to operate a Reclaiming Plant or to secure better results from their present equipment. Address R. R., care of THE INDIA RUBBER WORLD. [715]

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INFORMATION wanted of a "going" Mechanical Rubber Goods factory in which a controlling interest can be purchased, or the property bought outright, at a fair and reasonable figure. A proposition requiring an investment up to \$250,000 will be considered and possibly more. Address W. X. Y., care of "The India Rubber World." [712]

THE advertiser has for sale strictly up to date recipes for all kinds of Hard and Soft Rubber Goods, mechanical (molded and wrapped), gaskets, valves, tubing, sundries; hose, packing, belting; auto, carriage, and vehicle tires; bicycle tires; druggist sundries, stamp and sponge rubber, dental rubbers, dipped goods, cements—shoe and rubber; plans for latest dipping plant, latest vapor cure. Recipes are practical, guaranteed, cheapest and best known. In use by large manufacturers. All cures and particulars furnished. Rubber workers can increase income by possession of above knowledge. Invaluable to up-to-date men. No reasonable offer refused for single recipes or those desired. Address in confidence L. I., care of "The India Rubber World." [714]

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ONE new Birmingham Spreader, size 50", brand new, never taken out of the case it was shipped in from the factory; one Centrifugal Machine, size about 50" diameter; one large Engine, cylinder 24" x 46", made by Wright, Newburg, in the best condition; both steam and hydraulic Pumps; seven hydraulic Presses, 30" x 30"; three hand Presses, used in making Heels; seven 12" x 36" Grinders; one 15" x 24" Cracker; one 10" x 20" Cracker; one 18" x 40" Calender; one five roll 12" x 44" Calender; fifty Solid Tire Molds (Kelly style), with all sizes of cavities; Bicycle Tire Molds; Pneumatic Tire Molds, and a large lot of other Molds; about 30 tons of Shafting, Pulleys, Hangers; No. 2 Royle Tubing Machine; Boilers, Piping and other kinds of Rubber Mill Machinery; One large Cedar Tank, 23 ft. diameter, 23 ft. high, cedar 3" thick, 13 large iron bands; almost new, and in the best condition; One Box Nailing Machine.

Two Devulcanizers, will stand 125 lbs. working pressure, 6 ft. diameter, 25 ft. long; one Devulcanizer 5 ft. diameter, 25 ft. long, shell one inch thick, complete with tracks and cars; five lead lined Tanks and Washers; four Crackers, 12" x 24"; four Mills, 15" x 36", all complete with shafting, bearings, clutches, etc.; one Hydraulic 9" Ram, 4 opening Press, size of platens 30" x 30"; one two opening Boomer & Boschert Press, size of platens 48" x 48".

Rubber Mill equipment, such as extra Gears, Frames, and Rolls, coming in. PHILIP MCGRORY, Trenton, New Jersey.

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**Hevea Brasiliensis** (Pará rubber) seeds supplied from August to October every year; booking necessary before the end of July to avoid disappointments. Stumps of both kinds shipped all the year round.

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Tea of different sorts, Hybrid Coffee, Nutmeg, Fibers, Shade and Timber trees; Fruits, etc.—Seeds, Plants and Grafts supplied. Six different descriptive Price Lists, with special offers of *Hevea* and *Castilloa* seeds and stumps, on view at the office of THE INDIA RUBBER WORLD, or post free on application to

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TELEGRAPHIC ADDRESS: WILLIAM, HENERATGODA, CEYLON.



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**MECHANICAL ENGINEER**, who is competent, wanted to take charge of a large power plant and repair work. Technical graduate preferred, and some practical experience necessary. THE DIAMOND RUBBER CO., Akron, Ohio. [707]

**SALESMAN** wanted for a line of Mechanical Rubber Goods to work Greater New York. Address, stating experience, MECHANICAL, care of THE INDIA RUBBER WORLD. [717]

**SALESMAN.**—Reliable Mechanical Rubber Goods Salesman wanted for Southern territory. Give references, age and experience. Address S. T., care of THE INDIA RUBBER WORLD. [704]

**SALESMEN.**—Experienced Salesmen wanted in the Mechanical Rubber Goods line, with established trade. State age and experience. Address SALESMEN, care of THE INDIA RUBBER WORLD. [703]

**SALESMEN.**—Fifteen to twenty traveling Salesmen wanted by a well known and established Tire manufacturing company making standard goods. Only active men who know how to work effectively and all the time need apply. Exceptional opportunity for men of the right sort. Address TIRES, care of THE INDIA RUBBER WORLD. [706]

**SALESMEN**—Two first class Mechanical Goods Salesmen wanted, one for New York state and Pennsylvania, and one for the middle West. Must be experienced. Address RUBBER MANUFACTURER, care of THE INDIA RUBBER WORLD. [709]

**SUPERINTENDENT**—General all around man wanted for plant about to be erected to manufacture general Mechanical Rubber Goods Bicycle and Automobile Tires. Applicants must be especially expert in Mill work and able to supervise erection of plant; splendid opportunity for right man. Address R. O. C., care of THE INDIA RUBBER WORLD. [708]

**SUPERINTENDENT.**—Wanted by a large manufacturing concern, a young, energetic, thoroughly equipped Superintendent in the manufacture of high grade Mechanical Rubber Goods. A rare opportunity is here open for the right man. Highest references required. All communications confidential. Address A. B. C., care of THE INDIA RUBBER WORLD. [719]

### SITUATIONS WANTED.

**ASSISTANT SUPERINTENDENT.**—Position wanted as Assistant Superintendent by a young man having 20 years' experience in the Mechanical Goods line, with up-to-date ideas and methods in all branches of that line; best of references. Address P. X. Y., care of THE INDIA RUBBER WORLD. [702]

**HORSE SHOE PADS**—A practical man with 8 years' experience on Horse Shoe Pads and Wringer Rolls is open for a position anywhere. Competent to take charge of department, all up-to-date methods on Leather Back Pads. Address PADS, care of THE INDIA RUBBER WORLD. [701]

**MANAGER or SUPERINTENDENT.**—Position wanted as Manager or Superintendent of Mechanical Goods factory, by young man of 14 years' experience. Understands thoroughly, the buying, compounding, and making of Mechanical Goods of all kinds; Belting Packing, Hose, Molded Goods, Jar Rings, Tires, etc.; can reclaim all kinds of Scrap and Shoes; able to handle selling end; can show satisfactory results quickly; employed. Address Y. Z. X., care of THE INDIA RUBBER WORLD. [697]

**MANAGER OR SUPERINTENDENT.**—Position wanted as Manager or Superintendent of factory or department by man of 33, with 12 years' experience particularly on Molded Goods, Sundries, and Vehicle Tires. Thorough knowledge of compounding cost of production, up-to-date shop methods, etc. Can start Hard Rubber Department if desired; have best compounds in United States for latter line. Address EXECUTIVE, care of THE INDIA RUBBER WORLD. [690]

**MECHANICAL ENGINEER** wants position as Chief Engineer or Master Mechanic in Rubber factory. Has had 20 years' experience with Engines, Boilers, Electrical Power, Rubber Mill Machinery and Appliances, and is up-to-date in construction and repair work; good draftsman. Address ENGINEER, care of THE INDIA RUBBER WORLD. [699]

**SUPERINTENDENT** of experience in Mechanical Rubber Goods, in good connections, and who will be at liberty after January 1, is open to an engagement in a good factory; competent to build and equip a new factory or to remodel an old one. Feels qualified to make money for any Mechanical Rubber factory. Address PRACTICAL, care of THE INDIA RUBBER WORLD. [695]

**WANTED.**—A man who thoroughly understands curing cements and dipped goods; also compounding and mill work. Address F. W. H., care of THE INDIA RUBBER WORLD. [713]

**WILL** the company in the United States that has a position for a young American with thorough practical experience in Calender, Mill, Hose, Packing, Press, and general Mechanical lines, as well as Druggists' Sundries work, kindly address B. I. S. ENGLAND, care of THE INDIA RUBBER WORLD. [698]

**REMODELING** is my specialty. Can design, erect, and superintend anything in the Mechanical Goods line; American and English experience. Open for engagement. Address E. N. Z., care of THE INDIA RUBBER WORLD. [718]

### RECLAIMED RUBBER.

**AGENCY** for a good grade of American Reclaimed Rubber assured by a broker in Crude Rubber in Germany, representing important English, German, and Belgian houses. In view of the high prices of new rubber, a wider opportunity offers for the sale of reclaimed products in Europe than hitherto. Address CONGO, care of THE INDIA RUBBER WORLD. [710]

### AGENT WANTED FOR AMERICA.

A FRENCH manufacturer of Substitutes desires a General Agent for America, who is thoroughly acquainted with the India Rubber Goods manufacturing trade. Address Mme. F. LEFFANT & CIE., Ham, Somme, France. [692]

### See Also Preceding Page.

**HERBERT S. KIMBALL,**  
**MILL ARCHITECT and ENGINEER,**  
RUBBER FACTORY ENGINEERING.  
101 TREMONT STREET, BOSTON, MASS.



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ARE THE WORLD'S STANDARD VALVES.

For automatically reducing and absolutely maintaining an even steam or air pressure.

They are adapted for every need and guaranteed to work perfectly in every instance.

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# Reclaimed and Devulcanized Rubber

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CALENDER ROLL ENGRAVING.

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CHICAGO, ILL.

*Mention The India Rubber World when you write.*

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# BUYERS' DIRECTORY OF THE RUBBER TRADE.

CLASSIFIED LIST OF MANUFACTURERS AND DEALERS IN INDIA-RUBBER GOODS AND RUBBER MANUFACTURERS' SUPPLIES.

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Belting.  
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Gaskets.  
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Cleveland Rubber Co., Cleveland, O.  
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Empire Rubber Mfg. Co., Trenton, N. J.  
Eureka Fire Hose Co., New York.  
Eureka Rubber Mfg. Co. of Trenton.  
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Gutta Percha & Rubber Mfg. Co., Toronto.  
Home Rubber Co., Trenton, N. J.  
Lake Shore Rubber Co., Erie, Pa.  
Liverpool Rubber Co., Liverpool, Eng.  
Manhattan Rubber Mfg. Co., New York.  
Mechanical Rubber Co., New York.  
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New York Belting & Packing Co., N. Y.  
New York Rubber Co., New York.  
North British Rubber Co., Ltd., Edinburgh.  
Peerless Rubber Mfg. Co., New York.  
Revere Rubber Co., Youngstown, Ohio.  
Revere Rubber Co., Boston.  
Jos. Stokes Rubber Co., Trenton, N. J.

## MECHANICAL GOODS.

Trenton Rubber Mfg. Co., Trenton, N. J.  
Voorhees Rubber Mfg. Co., Jersey City.  
Whitman & Barnes Mfg. Co., Akron, O.  
**Air Brake Hose.**

Boston Belting Co., Boston-New York.  
Boston Woven Hose & Rubber Co.  
Canadian Rubber Co. of Montreal.  
Combination Rubber Mfg. Co., Bloomfield, N. J.  
Eureka Rubber Mfg. Co. of Trenton.  
B. F. Goodrich Co., Akron, O.  
Home Rubber Co., Trenton, N. J.  
N. J. Car Spring & Rubber Co., Jersey City.  
Peerless Rubber Mfg. Co., New York.  
Revere Rubber Co., Youngstown, Ohio.  
Voorhees Rubber Mfg. Co., Jersey City.  
Whitman & Barnes Mfg. Co., Akron, O.

### Belting (Canvas).

Boston Woven Hose & Rubber Co.  
Canadian Rubber Co. of Montreal.  
Eureka Fire Hose Co., New York.  
Peerless Rubber Mfg. Co., New York.  
Revere Rubber Co., Boston-New York.  
Sawyer Belting Co., East Cambridge, Mass.

### Billiard Cushions.

Boston Belting Co., Boston.  
Canadian Rubber Co. of Montreal.  
Combination Rubber Mfg. Co., Bloomfield, N. J.  
B. F. Goodrich Co., Akron, O.  
Manhattan Rubber Mfg. Co., New York.  
New York Belting & Packing Co., Ltd.  
New York Rubber Co., New York.  
Revere Rubber Co., Boston-New York.  
Whitman & Barnes Mfg. Co., Akron, O.

### Blankets—Printers'.

Boston Belting Co., Boston.  
Canadian Rubber Co. of Montreal.  
Hodgman Rubber Co., New York.  
Liverpool Rubber Co., Liverpool, Eng.  
N. J. Car Spring & Rubber Co., Jersey City, N. J.  
Revere Rubber Co., Boston-New York.  
Voorhees Rubber Mfg. Co., Jersey City.

## MECHANICAL GOODS.

Brushes.  
C. J. Bailey & Co., Boston.  
Buffers.  
Boston Belting Co., Boston-New York.  
Canadian Rubber Co. of Montreal.  
Liverpool Rubber Co., Ltd., Liverpool.

### "Bull Dog" Packing.

Boston Woven Hose & Rubber Co.  
Card Cloths.  
Canadian Rubber Co. of Montreal.  
Mechanical Fabric Co., Providence, R. I.

### Carriage Mats.

Boston Belting Co., Boston-New York.  
Boston Woven Hose & Rubber Co.  
Canadian Rubber Co. of Montreal.  
B. F. Goodrich Co., Akron, O.  
Home Rubber Co., Trenton, N. J.  
N. J. Car Spring & Rubber Co., Jersey City, N. J.  
Peerless Rubber Mfg. Co., New York.  
Voorhees Rubber Mfg. Co., Jersey City.

### Cord Mats.

Canadian Rubber Co. of Montreal.  
Faultless Rubber Co., Akron, Ohio.  
B. F. Goodrich Co., Akron, O.  
N. J. Car Spring & Rubber Co., Jersey City, N. J.  
New York Belting & Packing Co., N. Y.

### Cord (Pure Rubber).

Boston Belting Co., Boston-New York.  
Boston Woven Hose & Rubber Co.  
Cleveland Rubber Co., Cleveland, O.  
Davol Rubber Co., Providence, R. I.  
Empire Rubber Mfg. Co., Trenton, N. J.  
Home Rubber Co., Trenton, N. J.  
Manhattan Rubber Mfg. Co., New York.  
N. J. Car Spring & Rubber Co., Jersey City, N. J.  
New York Belting & Packing Co., N. Y.  
Peerless Rubber Mfg. Co., New York.  
Revere Rubber Co., Youngstown, Ohio.  
Revere Rubber Co., Boston-New York.  
Voorhees Rubber Mfg. Co., Jersey City.

## MECHANICAL GOODS.

Deckle Straps.  
Boston Belting Co., Boston.  
Liverpool Rubber Co., Liverpool, Eng.  
Mechanical Rubber Co., Chicago.  
New York Belting & Packing Co., N. Y.  
Revere Rubber Co., Youngstown, O.  
Revere Rubber Co., Boston-New York.  
"Dods" Packing.

Bowers Rubber Co., San Francisco, Cal.

### Door Springs.

Hodgman Rubber Co., New York.

### Dredging Sleeves.

Boston Belting Co., Boston-New York.  
Boston Woven Hose & Rubber Co.  
B. F. Goodrich Co., Akron, O.  
Home Rubber Co., Trenton, N. J.  
N. J. Car Spring & Rubber Co., Jersey City.  
Revere Rubber Co., Youngstown, O.

### Fleshing Bands.

Revere Rubber Co., Youngstown, O.

### Force Cups.

Hodgman Rubber Co., New York.

### "Forsyth" Combination Packing.

Boston Belting Co., Boston-New York.

### Fruit Jar Rings.

Boston Woven Hose & Rubber Co.  
Canadian Rubber Co. of Montreal.  
Cleveland Rubber Co., Cleveland, O.  
B. F. Goodrich Co., Akron, O.  
Empire Rubber Mfg. Co., Trenton, N. J.  
Eureka Rubber Mfg. Co. of Trenton.  
Manhattan Rubber Mfg. Co., New York.  
Revere Rubber Co., Youngstown, Ohio.  
New York Belting & Packing Co., N. Y.  
Whitman & Barnes Mfg. Co., Akron, O.

### Fuller Balls.

B. F. Goodrich Co., Akron, O.  
N. J. Car Spring & Rubber Co., Jersey City.



## RUBBER BUYERS' DIRECTORY—CONTINUED.

## MECHANICAL GOODS.

## Fuller Balls—Continued.

Peerless Rubber Mfg. Co., New York.  
 Republic Rubber Co., Youngstown, O.  
 Whitman & Barnes Mfg. Co., Akron, O.

## Gage Glass Washers.

Boston Belting Co., Boston, Mass.  
 Canadian Rubber Co. of Montreal.  
 Cleveland Rubber Co., Cleveland, O.  
 Empire Rubber Mfg. Co., Trenton, N. J.  
 Home Rubber Co., Trenton, N. J.  
 Liverpool Rubber Co., Liverpool, Eng.  
 Munnah Rubber Mfg. Co., New York.  
 Mechanical Rubber Co., Chicago, Ill.  
 N. J. Car Spring & Rubber Co., Jersey City, N. J.  
 New York Belting & Packing Co., N. Y.  
 New York Rubber Co., New York.  
 Revere Rubber Co., Boston, Mass.  
 Jos. Stokes Rubber Co., Trenton, N. J.  
 Voorhees Rubber Mfg. Co., Jersey City, N. J.

## Gas-Bags (Rubber).

Canadian Rubber Co. of Montreal.  
 Cleveland Rubber Co., Cleveland, O.  
 Davol Rubber Co., Providence, R. I.  
 B. F. Goodrich Co., Akron, O.  
 Liverpool Rubber Co., Liverpool, Eng.  
 N. J. Car Spring & Rubber Co., Jersey City, N. J.  
 Peerless Rubber Mfg. Co., New York.  
 Tyer Rubber Co., Andover, Mass.  
 Voorhees Rubber Mfg. Co., Jersey City.

## Gasket Tubing.

Canadian Rubber Co. of Montreal.  
 Jenkins Bros., New York.

## Hat Bags.

Boston Belting Co., Boston.  
 Canadian Rubber Co. of Montreal.  
 Home Rubber Co., Trenton, N. J.  
 Manhattan Rubber Mfg. Co., New York.  
 Mattson Rubber Co.,  
 Mechanical Rubber Co., Chicago.  
 N. J. Car Spring & Rubber Co., Jersey City, N. J.  
 New York Belting & Packing Co., N. Y.  
 New York Rubber Co., New York.  
 Peerless Rubber Mfg. Co., New York.  
 Republic Rubber Co., Youngstown, O.  
 Revere Rubber Co., Boston.

## Horse Shoe Pads.

Canadian Rubber Co. of Montreal.  
 Home Rubber Co., Trenton, N. J.  
 Peerless Rubber Mfg. Co., New York.  
 Plymouth Rubber Co., Stoughton, Mass.  
 Revere Rubber Co., Boston-New York.  
 Voorhees Rubber Mfg. Co., Jersey City.  
 Whitman & Barnes Mfg. Co., Akron, O.

## Hose—Armored.

## Hose—Wire Wound.

Boston Belting Co., Boston-New York.  
 Boston Woven Hose & Rubber Co.  
 Canadian Rubber Co. of Montreal.  
 B. F. Goodrich Co., Akron, O.  
 N. J. Car Spring & Rubber Co., Jersey City.  
 Peerless Rubber Mfg. Co., New York.  
 Republic Rubber Co., Youngstown, O.  
 Revere Rubber Co., Boston-New York.  
 Voorhees Rubber Mfg. Co., Jersey City.

## Hose Couplings and Fittings.

Boston Woven Hose & Rubber Co.  
 Canadian Rubber Co. of Montreal.

## Hose Linings.

Boston Belting Co., Boston-New York.  
 Boston Woven Hose & Rubber Co.  
 Empire Rubber Mfg. Co., Trenton, N. J.  
 Eureka Rubber Mfg. Co., Trenton, N. J.  
 N. J. Car Spring & Rubber Co., Jersey City, N. J.  
 Peerless Rubber Mfg. Co., New York.

## Hose—Protected.

Boston Belting Co., Boston-New York.  
 Revere Rubber Co., Boston-New York.  
 Voorhees Rubber Mfg. Co., Jersey City.

## Hose Racks and Reels.

Wirt & Knox Mfg. Co., Philadelphia.

## Hose—Rubber Lined.

COTTON AND LINEN.  
 Boston Belting Co., Boston-New York.  
 Boston Woven Hose & Rubber Co.

## MECHANICAL GOODS.

## Hose Rubber Lined. Continued.

## COTTON AND LINEN

Canadian Rubber Co. of Montreal.  
 Cleveland Rubber Co., Cleveland, O.  
 Empire Rubber Mfg. Co., Trenton, N. J.  
 Eureka Fire Hose Co., New York.  
 Eureka Rubber Mfg. Co. of Trenton.  
 B. F. Goodrich Co., Akron, O.  
 Gutta Percha & Rubber Mfg. Co., N. Y.  
 Gutta Percha and Rubber Mfg. Co. of Toronto.  
 Home Rubber Co., Trenton, N. J.  
 Manhattan Rubber Mfg. Co., New York.  
 N. J. Car Spring & Rubber Co., Jersey City, N. J.  
 New York Belting & Packing Co., N. Y.  
 Peerless Rubber Mfg. Co., New York.  
 Republic Rubber Co., Youngstown, O.  
 Revere Rubber Co., Boston.  
 Jos. Stokes Rubber Co., Trenton, N. J.  
 Voorhees Rubber Mfg. Co., Jersey City.  
 Whitman & Barnes Mfg. Co., Akron, O.

## Hose—Submarine.

Boston Belting Co., Boston-New York.  
 B. F. Goodrich Co., Akron, O.  
 Republic Rubber Co., Youngstown, O.

## "Jenkins '96" Packing.

Jenkins Bros., New York.

## Lawn Sprinklers.

Boston Woven Hose & Rubber Co.  
 Canadian Rubber Co. of Montreal.

## Mallets (Rubber).

Boston Belting Co., Boston-New York.  
 B. F. Goodrich Co., Akron, O.  
 Peerless Rubber Mfg. Co., New York.  
 Revere Rubber Co., Boston-New York.

## Mould Work.

[See Mechanical Rubber Goods.]  
 Davidson Rubber Co., Boston.  
 Davol Rubber Co., Providence, R. I.  
 Faultless Rubber Co., Akron, O.  
 Hardman Rubber Co., Belleville, N. J.  
 Hodgman Rubber Co., New York.  
 La Crosse (Wis.) Rubber Mills Co.  
 Mattson Rubber Co., New York.  
 National India Rubber Co., Bristol, R. I.  
 Plymouth Rubber Co., Stoughton, Mass.  
 Tyer Rubber Co., Andover, Mass.

## "Nubian" Packing.

Voorhees Rubber Mfg. Co., Jersey City.

## Oil Well Supplies.

Boston Belting Co., Boston-New York.  
 Boston Woven Hose & Rubber Co.  
 B. F. Goodrich Co., Akron, O.  
 Home Rubber Co., Trenton, N. J.  
 Lake Shore Rubber Co., Erie, Pa.  
 N. J. Car Spring & Rubber Co., Jersey City.  
 Peerless Rubber Mfg. Co., New York.  
 Republic Rubber Co., Youngstown, O.  
 Revere Rubber Co., Boston-Pittsburgh.  
 Voorhees Rubber Mfg. Co., Jersey City.  
 Whitman & Barnes Mfg. Co., Akron, O.

## Paper Machine Rollers.

Boston Belting Co., Boston-New York.  
 B. F. Goodrich Co., Akron, O.  
 Republic Rubber Co., Youngstown, O.  
 Revere Rubber Co., Boston-New York.  
 Peerless Rubber Mfg. Co., New York.  
 Voorhees Rubber Mfg. Co., Jersey City.

## "Perfection" Belting.

Boston Woven Hose & Rubber Co.

## Plumbers' Supplies.

Canadian Rubber Co. of Montreal.  
 B. F. Goodrich Co., Akron, O.  
 Republic Rubber Co., Youngstown, O.

## Pump Valves.

[See Mechanical Rubber Goods.]  
 Jenkins Bros., New York.

## "Rainbow" Packing.

Peerless Rubber Mfg. Co., New York.

## Rings.

Boston Belting Co., Boston-New York.  
 B. F. Goodrich Co., Akron, O.  
 Peerless Rubber Mfg. Co., New York.  
 Plymouth Rubber Co., Stoughton, Mass.  
 Republic Rubber Co., Youngstown, O.

## MECHANICAL GOODS.

## Rollers—Rubber Covered.

Boston Belting Co., Boston.  
 Canadian Rubber Co. of Montreal.  
 Cleveland Rubber Co., Cleveland, O.  
 Empire Rubber Mfg. Co., Trenton, N. J.  
 Eureka Rubber Mfg. Co. of Trenton.  
 B. F. Goodrich Co., Akron, O.  
 Home Rubber Co., Trenton, N. J.  
 Manhattan Rubber Mfg. Co., New York.  
 Mechanical Rubber Co., Chicago.  
 N. J. Car Spring & Rubber Co., Jersey City, N. J.  
 New York Belting & Packing Co., N. Y.  
 Peerless Rubber Mfg. Co., New York.  
 Plymouth Rubber Co., Stoughton, Mass.  
 Republic Rubber Co., Youngstown, O.  
 Revere Rubber Co., Boston-New York.

## Sewing Machine Rubbers.

B. F. Goodrich Co., Akron, O.

## Springs—Rubber.

Boston Belting Co., Boston-New York.  
 Canadian Rubber Co. of Montreal.  
 B. F. Goodrich Co., Akron, O.  
 Hardman Rubber Co., Belleville, N. J.  
 Liverpool Rubber Co., Liverpool, Eng.  
 N. J. Car Spring & Rubber Co., Jersey City.  
 Peerless Rubber Mfg. Co., New York.  
 Plymouth Rubber Co., Stoughton, Mass.  
 Republic Rubber Co., Youngstown, Ohio.  
 Revere Rubber Co., Boston-New York.  
 Voorhees Rubber Mfg. Co., Jersey City.

## Stair Treads.

Boston Belting Co., Boston-New York.  
 Boston Woven Hose & Rubber Co.  
 Canadian Rubber Co. of Montreal.  
 Cleveland Rubber Co., Cleveland, O.  
 Empire Rubber Mfg. Co., Trenton, N. J.  
 Home Rubber Co., Trenton, N. J.  
 Liverpool Rubber Co., Liverpool, Eng.  
 Manhattan Rubber Mfg. Co., New York.  
 N. J. Car Spring & Rubber Co., Jersey City, N. J.  
 New York Belting & Packing Co., N. Y.  
 New York Rubber Co., New York.  
 Peerless Rubber Mfg. Co., New York.  
 Republic Rubber Co., Youngstown, O.  
 Revere Rubber Co., Boston-New York.  
 Voorhees Rubber Mfg. Co., Jersey City.

## Thread.

Mechanical Fabric Co., Providence, R. I.  
 Revere Rubber Co., Boston.

## Tiling.

Canadian Rubber Co. of Montreal.  
 B. F. Goodrich Co., Akron, O.  
 Gutta Percha & Rubber Mfg. Co., N. Y.  
 N. J. Car Spring & Rubber Co., Jersey City.  
 New York Belting & Packing Co., N. Y.  
 Peerless Rubber Mfg. Co., New York.  
 Republic Rubber Co., Youngstown, Ohio.  
 Voorhees Rubber Mfg. Co., Jersey City.

## Tires.

AUTOMOBILE, BICYCLE, AND CARRIAGE.  
 Canadian Rubber Co. of Montreal.  
 Continental Caoutchouc & Guttapercha Co., Hanover.  
 Empire Rubber Mfg. Co., Trenton, N. J.  
 B. F. Goodrich Co., Akron, O.  
 Gutta Percha & Rubber Mfg. Co., Toronto.  
 Kokomo Rubber Co., Kokomo, Ind.  
 Lake Shore Rubber Co., Erie, Pa.  
 Liverpool Rubber Co., Liverpool, Eng.  
 North British Rubber Co., Ltd., Edinburgh.  
 Plymouth Rubber Co., Stoughton, Mass.  
 Republic Rubber Co., Youngstown, O.

## AUTOMOBILE AND CARRIAGE.

Boston Belting Co., Boston-New York.  
 Revere Rubber Co., Boston-New York.  
 Eureka Rubber Mfg. Co., Trenton, N. J.

## Truck Bands.

Boston Belting Co., Boston.  
 Cleveland Rubber Co., Cleveland, O.  
 Empire Rubber Mfg. Co., Trenton, N. J.  
 B. F. Goodrich Co., Akron, O.  
 Home Rubber Co., Trenton, N. J.  
 Manhattan Rubber Mfg. Co., New York.  
 Mechanical Rubber Co., Chicago.  
 N. J. Car Spring & Rubber Co., Jersey City, N. J.

## MECHANICAL GOODS.

## Truck Bands—Continued.

New York Belting & Packing Co., N. Y.  
 Peerless Rubber Mfg. Co., New York.  
 Republic Rubber Co., Youngstown, O.  
 Voorhees Rubber Mfg. Co., Jersey City.  
 Whitman & Barnes Mfg. Co., Akron, O.

## Tubing.

[See Mechanical Rubber Goods.]  
 American Hard Rubber Co., New York.  
 Davidson Rubber Co., Boston.  
 Davol Rubber Co., Providence, R. I.  
 Hardman Rubber Co., Belleville, N. J.  
 Plymouth Rubber Co., Stoughton, Mass.  
 Tyer Rubber Co., Andover, Mass.

## Tubing (Beer).

Boston Belting Co., Boston-New York.  
 Boston Woven Hose & Rubber Co.  
 Canadian Rubber Co. of Montreal.  
 Faultless Rubber Co., Akron, Ohio.  
 B. F. Goodrich Co., Akron, O.  
 Peerless Rubber Mfg. Co., New York.  
 Plymouth Rubber Co., Stoughton, Mass.  
 Republic Rubber Co., Youngstown, O.  
 Voorhees Rubber Mfg. Co., Jersey City.

## "Usudurian" Packing.

Revere Rubber Co., Boston-New York.

## Valve Balls.

Boston Belting Co., Boston.  
 Cleveland Rubber Co., Cleveland, O.  
 Manhattan Rubber Mfg. Co., New York.  
 Mechanical Rubber Co., Chicago.  
 New York Belting & Packing Co., N. Y.  
 New York Rubber Co., New York.  
 Peerless Rubber Mfg. Co., New York.  
 Republic Rubber Co., Youngstown, O.  
 Whitman & Barnes Mfg. Co., Akron, O.

## Valve Discs.

American Hard Rubber Co., New York.  
 Boston Belting Co., Boston-New York.  
 B. F. Goodrich Co., Akron, O.  
 Peerless Rubber Mfg. Co., New York.  
 Republic Rubber Co., Youngstown, O.  
 Revere Rubber Co., Boston-New York.

## Valves.

[See Mechanical Rubber Goods.]  
 Jenkins Bros., New York-Chicago.  
 Plymouth Rubber Co., Stoughton, Mass.

## Wringer Rolls.

Canadian Rubber Co. of Montreal.  
 Cleveland Rubber Co., Cleveland, O.  
 B. F. Goodrich Co., Akron, O.  
 Home Rubber Co., Trenton, N. J.  
 Republic Rubber Co., Youngstown, O.

## DRUGGISTS' AND STATIONERS' SUNDRIES

## Atomizers.

## Bandages.

## Bulbs.

## Syringes.

## Water Bottles.

## Druggists' Sundries—General.

American Hard Rubber Co., New York.  
 C. J. Bailey & Co., Boston.  
 Geo. Borgfeldt & Co., New York.  
 Canadian Rubber Co. of Montreal.  
 Cleveland Rubber Co., Cleveland, O.  
 Davidson Rubber Co., Boston.  
 Davol Rubber Co., Providence, R. I.  
 Faultless Rubber Co., Akron, O.  
 B. F. Goodrich Co., Akron, O.  
 Hanover Rubber Co., Hanover, Germany.  
 Hardman Rubber Co., Belleville, N. J.  
 Hodgman Rubber Co., New York.  
 North British Rubber Co., Ltd., Edinburgh.  
 Tyer Rubber Co., Andover, Mass.

## Balls, Dolls and Toys.

Geo. Borgfeldt & Co., New York.  
 Canadian Rubber Co. of Montreal.  
 Continental Caoutchouc & Guttapercha Co.  
 B. F. Goodrich Co., Akron, O.  
 Hanover Rubber Co., Hanover, Germany.  
 New York Rubber Co., New York.  
 Whitman & Barnes Mfg. Co., Akron, O.



## RUBBER BUYERS' DIRECTORY—CONTINUED.

## DRUGGISTS' SUNDRIES

## Combs.

American Hard Rubber Co., New York  
Geo. Borgfeldt & Co., New York.  
Hanover Rubber Co., Hanover, Germany.

## Elastic Bands.

Canadian Rubber Co. of Montreal.  
Davidson Rubber Co., Boston.  
Daval Rubber Co., Providence, R. I.  
B. F. Goodrich Co., Akron, O.  
Hodgman Rubber Co., New York-Boston.  
Tyer Rubber Co., Andover, Mass.  
Whitman & Barnes Mfg. Co., Akron, O.

## Erasive Rubbers.

Davidson Rubber Co., Boston.  
B. F. Goodrich Co., Akron, O.  
Hardman Rubber Co., Belleville, N. J.  
Mattson Rubber Co., New York.

## Finger Cots.

Faultless Rubber Mfg. Co., Akron, O.  
B. F. Goodrich Co., Akron, O.  
Pure Gum Specialty Co., Barberton, O.

## Gloves.

Canadian Rubber Co. of Montreal.  
Daval Rubber Co., Providence, R. I.  
Faultless Rubber Co., Akron, O.  
B. F. Goodrich Co., Akron, O.  
Pure Gum Specialty Co., Barberton, O.

## Hard Rubber Goods.

American Hard Rubber Co., New York.  
Geo. Borgfeldt & Co., New York.  
Canadian Rubber Co. of Montreal.  
Daval Rubber Co., Providence, R. I.  
Hanover Rubber Co., Hanover, Germany.  
Hardman Rubber Co., Belleville, N. J.  
Stokes Rubber Co., Joseph, Trenton, N. J.  
Tyer Rubber Co., Andover, Mass.

## Hospital Sheetings.

Cleveland Rubber Co., Cleveland, O.  
Davidson Rubber Co., Boston.  
Daval Rubber Co., Providence, R. I.  
Hodgman Rubber Co., New York.  
Plymouth Rubber Co., Stoughton, Mass.  
Tyer Rubber Co., Andover, Mass.

## Hot Water Bottles.

[See Water Bottles.]

## Ice Bags and Ice Caps.

Faultless Rubber Co., Akron, Ohio.  
B. F. Goodrich Co., Akron, O.  
Hardman Rubber Co., Belleville, N. J.  
Pure Gum Specialty Co., Barberton, O.  
Tyer Rubber Co., Andover, Mass.

## Life Preservers.

Hodgman Rubber Co., New York.

## Nipples.

Canadian Rubber Co. of Montreal.  
Cleveland Rubber Co., Cleveland, O.  
Davidson Rubber Co., Boston.  
Daval Rubber Co., Providence, R. I.  
Faultless Rubber Co., Akron, O.  
B. F. Goodrich Co., Akron, O.  
Pure Gum Specialty Co., Barberton, O.  
Tyer Rubber Co., Andover, Mass.

## Sponges (Rubber).

Faultless Rubber Co., Ashland, Ohio.  
B. F. Goodrich Co., Akron, O.

## Stationers' Sundries.

American Hard Rubber Co., New York.  
Geo. Borgfeldt & Co., New York.  
Canadian Rubber Co. of Montreal.  
Cleveland Rubber Co., Cleveland, O.  
Davidson Rubber Co., Boston.  
Daval Rubber Co., Providence, R. I.  
B. F. Goodrich Co., Akron, O.  
Hanover Rubber Co., Hanover, Germany.  
Hardman Rubber Co., Belleville, N. J.  
Hodgman Rubber Co., New York-Boston.  
Tyer Rubber Co., Andover, Mass.

## Stopples (Rubber).

Cleveland Rubber Co., Cleveland, O.  
Daval Rubber Co., Providence, R. I.  
Hodgman Rubber Co., New York.  
Manhattan Rubber Mfg. Co., New York.  
New York Belting & Packing Co., N. Y.  
Tyer Rubber Co., Andover, Mass.  
Whitman & Barnes Mfg. Co., Akron, O.

## DRUGGISTS' SUNDRIES.

## Throat Bags.

Cleveland Rubber Co., Cleveland, O.  
Daval Rubber Co., Providence, R. I.  
B. F. Goodrich Co., Akron, O.  
Tyer Rubber Co., Andover, Mass.

## Tobacco Pouches.

Canadian Rubber Co. of Montreal.  
Faultless Rubber Co., Akron, Ohio.  
B. F. Goodrich Co., Akron, O.  
Pure Gum Specialty Co., Barberton, O.  
Tyer Rubber Co., Andover, Mass.

MACKINTOSHED  
AND SURFACE  
GOODS

## Air Goods (Rubber).

Canadian Rubber Co. of Montreal.  
Cleveland Rubber Co., Cleveland, O.  
Daval Rubber Co., Providence, R. I.  
B. F. Goodrich Co., Akron, O.  
Hodgman Rubber Co., New York.  
New York Rubber Co., New York.  
National India Rubber Co., Providence.  
Tyer Rubber Co., Andover, Mass.

## Air Mattresses.

Canadian Rubber Co. of Montreal.  
Mechanical Fabric Co., Providence, R. I.

## Barbers' Bibs.

Daval Rubber Co., Providence, R. I.  
Tyer Rubber Co., Andover, Mass.

## Bathing Caps.

Daval Rubber Co., Providence, R. I.  
B. F. Goodrich Co., Akron, O.

## Bellows Cloths.

Boston Rubber Co., Boston.  
Cleveland Rubber Co., Cleveland, O.  
Hodgman Rubber Co., New York.  
La Crosse (Wis.) Rubber Mills Co.

## Calendering.

La Crosse (Wis.) Rubber Mills Co.  
Milford Rubber Co., Boston.  
Plymouth Rubber Co., Stoughton, Mass.

## Carriage Ducks and Drills.

Cleveland Rubber Co., Cleveland, O.  
Empire Rubber Mfg. Co., Trenton, N. J.  
Eureka Rubber Mfg. Co. of Trenton.  
Gutta Percha & Rubber Mfg. Co. of Toronto.

## Clothing.

Apsley Rubber Co., Hudson, Mass.  
Canadian Rubber Co. of Montreal.  
Cleveland Rubber Co., Cleveland, O.  
Granby Rubber Co., Granby, Quebec.  
Gutta Percha & Rubber Mfg. Co. of Toronto.  
Hodgman Rubber Co., New York.  
La Crosse (Wis.) Rubber Mills Co.  
Mann Summer Clothing Co., New York.  
North British Rubber Co., Ltd., Edinburgh.

## Cravenette.

Cravenette Co., Ltd.

## Diving Dresses.

Hodgman Rubber Co., New York.

## Dress Shields.

Hodgman Rubber Co., New York.  
Mattson Rubber Co., New York.

## Horse Covers.

Hodgman Rubber Co., New York.

## Leggings.

Cleveland Rubber Co., Cleveland, O.  
Hodgman Rubber Co., New York.

## Mackintoshes.

[See Clothing.]

## Proofing.

Canadian Rubber Co. of Montreal.  
La Crosse (Wis.) Rubber Mills Co.  
Milford Rubber Co., Boston.  
Plymouth Rubber Co., Stoughton, Mass.

## MACKINTOSHED GOODS.

## Rain Coats.

Cravenette Co., Ltd.

## Rubber Coated Cloths.

Mechanical Fabric Co., Providence, R. I.

RUBBER  
FOOTWEAR

## Boots and Shoes.

American Rubber Co., Boston.  
Apsley Rubber Co., Hudson, Mass.  
Boston Rubber Shoe Co., Boston.  
Canadian Rubber Co. of Montreal.  
L. Candee & Co., New Haven, Ct.  
Granby Rubber Co., Granby, Quebec.  
Gutta Percha & Rubber Mfg. Co. of Toronto.  
Hood Rubber Co., Boston.  
Liverpool Rubber Co., Liverpool, Eng.  
Lycoming Rubber Co., Williamsport, Pa.  
Meyer Rubber Co., New York.  
National India Rubber Co., Boston.  
North British Rubber Co., Ltd., Edinburgh.  
United States Rubber Co., New York.  
Wales-Goodyear Rubber Co., Boston.  
Woonsocket Rubber Co., Providence.

## Heels and Soles.

Boston Woven Hose & Rubber Co.  
Canadian Rubber Co. of Montreal.  
Continental Caoutchouc & Gutta-percha Co., Hanover.  
Plymouth Rubber Co., Stoughton, Mass.

## Tennis Shoes.

American Rubber Co., Boston.  
Boston Rubber Shoe Co., Boston.  
Granby Rubber Co., Granby, Quebec.  
Liverpool Rubber Co., Liverpool, Eng.  
National India Rubber Co., Providence.  
United States Rubber Co., New York.

## Tennis Soles.

Canadian Rubber Co. of Montreal.  
Jos. Stokes Rubber Co., Trenton, N. J.

## Wading Pants.

Canadian Rubber Co. of Montreal.  
Hodgman Rubber Co., New York.

SPORTING  
GOODS

## Foot Balls.

Canadian Rubber Co. of Montreal.  
Cleveland Rubber Co., Cleveland, O.  
Faultless Rubber Co., Akron, Ohio.  
B. F. Goodrich Co., Akron, O.  
Hodgman Rubber Co., New York.

## Golf Balls.

Boston Belting Co., Boston.  
Canadian Rubber Co. of Montreal.  
Davidson Rubber Co., Boston.  
B. F. Goodrich Co., Akron, O.  
Whitman & Barnes Mfg. Co., Akron, O.

## Submarine Outfits.

Hodgman Rubber Co., New York.

## Sporting Goods.

Canadian Rubber Co. of Montreal.  
Faultless Rubber Co., Akron, Ohio.  
B. F. Goodrich Co., Akron, O.  
Hodgman Rubber Co., New York.  
Tyer Rubber Co., Andover, Mass.

## Striking Bags.

Canadian Rubber Co. of Montreal.  
Faultless Rubber Co., Akron, Ohio.  
B. F. Goodrich Co., Akron, O.  
Pure Gum Specialty Co., Barberton, O.

## Dental Gum.

American Hard Rubber Co., New York.  
Cleveland Rubber Co., Cleveland, O.  
Tyer Rubber Co., Andover, Mass.

## Rubber Dam.

Cleveland Rubber Co., Cleveland, O.  
Daval Rubber Co., Providence, R. I.  
Hodgman Rubber Co., New York.  
Tyer Rubber Co., Andover, Mass.

DENTAL AND  
STAMP RUBBER

## Stamp Gum.

Mattson Rubber Co., New York.  
Mechanical Rubber Co., Chicago, Ill.  
N. J. Car Spring & Rubber Co., Jersey City, N. J.  
New York Belting & Packing Co., N. Y.

## ELECTRICAL

## Electrical Supplies.

American Hard Rubber Co., New York.  
Lake Shore Rubber Co., Erie, Pa.  
Joseph Stokes Rubber Co., Trenton, N. J.  
Massachusetts Chemical Co., Boston.  
Tyer Rubber Co., Andover, Mass.

## Friction Tape.

Boston Belting Co., Boston.  
Boston Woven Hose & Rubber Co.  
Canadian Rubber Co. of Montreal.  
Cleveland Rubber Co., Cleveland, O.  
B. F. Goodrich Rubber Co., Akron, O.  
Massachusetts Chemical Co., Boston.  
Mechanical Rubber Co., Chicago.  
Home Rubber Co., Trenton, N. J.  
Revere Rubber Co., Boston-New York.

## Hard Rubber Goods.

American Hard Rubber Co., New York.  
Canadian Rubber Co. of Montreal.  
Joseph Stokes Rubber Co., Trenton, N. J.

## Insulating Compounds.

Canadian Rubber Co. of Montreal.  
Gutta-Percha & Rubber Mfg. Co., Toronto.  
Massachusetts Chemical Co., Boston.

## Insulated Wire and Cables.

National India Rubber Co., Providence.

## Splicing Compound.

Home Rubber Co., Trenton, N. J.

## MISCELLANEOUS

## Architect and Engineer.

Herbert S. Kimball, Boston.

## Cement (Rubber).

Boston Belting Co., Boston.  
Canadian Rubber Co. of Montreal.  
B. F. Goodrich Co., Akron, O.  
Manhattan Rubber Mfg. Co., New York.  
N. J. Car Spring & Rubber Co., Jersey City, N. J.  
New York Belting & Packing Co., N. Y.

## Chemical Analyses.

Durand Woodman, Ph. D., New York.  
H. L. Terry, Manchester, England.

## Chemists.

Stephen P. Sharples, Boston, Mass.  
Durand Woodman, Ph. D., New York.

## Investments.

Badger Mexican Plantation Co., Racine, Wis.  
Conservative Rubber Production Co., San Francisco.  
Hidalgo Plantation and Commercial Co., San Francisco.

## Rubber Lands For Sale.

O. H. Harrison, San Francisco.

## Rubber Planting.

Badger Mexican Plantation Co., Racine, Wis.  
Conservative Rubber Production Co., San Francisco.  
Hidalgo Plantation and Commercial Co., San Francisco.

## Rubber Tree Seeds.

J. P. William & Bros., Heneratgoda, Ceylon.

## Thermometers.

Hohmann & Maurer Mfg. Co., Rochester, N. Y.

## Travel.

Hamburg-American Line, New York.



## MACHINERY AND SUPPLIES FOR RUBBER MILLS.

RUBBER  
MACHINERY

## Acid Tanks.

Birmingham Iron Foundry, Derby, Ct.

## Band Cutting Machine.

A. Adamson, Akron, O.  
Birmingham Iron Foundry, Derby, Ct.

## Belt Folding Machines.

Birmingham Iron Foundry, Derby, Ct.  
Farrel Foundry & Mach. Co., Ansonia, Ct.

## Belt Slitters.

Birmingham Iron Foundry, Derby, Ct.  
Farrel Foundry & Mach. Co., Ansonia, Ct.

## Belt Stretchers.

Birmingham Iron Foundry, Derby, Ct.  
Farrel Foundry & Mach. Co., Ansonia, Ct.  
Hoggson & Pettis Mfg. Co., New Haven, Ct.

## Blowers.

B. F. Sturtevant Co., Boston.

## Boilers.

William R. Thropp, Trenton, N. J.

## Braidiers.

New England Butt Co., Providence, R. I.

## Buckles.

The Weld Mfg. Co., Boston.

## Calenders.

Birmingham Iron Foundry, Derby, Ct.  
Farrel Foundry & Mach. Co., Ansonia, Ct.  
Textile-Finishing Machinery Co., Providence, R. I.

## Castings.

A. Adamson, Akron, O.  
Birmingham Iron Foundry, Derby, Ct.  
Farrel Foundry & Mach. Co., Ansonia, Ct.

## Chucks (Lathe).

Hoggson &amp; Pettis Mfg. Co., New Haven, Ct.

## Churns.

American Tool &amp; Machine Co., Boston

## Cloth Dryers.

Birmingham Iron Foundry, Derby, Ct.  
Farrel Foundry & Mach. Co., Ansonia, Ct.

## Clutches.

Farrel Foundry &amp; Mach. Co., Ansonia, Ct.

## Crackers.

Birmingham Iron Foundry, Derby, Ct.

## Devulcanizers.

Birmingham Iron Foundry, Derby, Ct.  
Edred W. Clark, Hartford, Ct.  
William R. Thropp, Trenton, N. J.

## Dies.

Hoggson &amp; Pettis Mfg. Co., New Haven, Ct.

## Doubling Machines.

American Tool &amp; Machine Co., Boston.

## Drying Apparatus.

B. F. Sturtevant Co., Boston.

## Drying Machines.

Joseph P. Devine, Buffalo, N. Y.  
Birmingham Iron Foundry, Derby, Ct.  
Textile-Finishing Machinery Co., Providence, R. I.

## Dynamoes.

B. F. Sturtevant Co., Boston.

## Embossing Calenders.

Textile-Finishing Machinery Co., Providence, R. I.

## Engines.

B. F. Sturtevant Co., Boston.

William R. Thropp, Trenton, N. J.

## Engraving Roll.

Hoggson &amp; Pettis Mfg. Co., New Haven, Ct.

## Exhaust Fans and Heads.

B. F. Sturtevant Co., Boston.

## Factory Construction.

Herbert S. Kimball, Boston

## Fans (Electric).

B. F. Sturtevant Co., Boston.

## Fans (Exhaust and Ventilating).

B. F. Sturtevant Co., Boston.

## Forges.

B. F. Sturtevant Co., Boston.

## Fuel Economizers.

B. F. Sturtevant Co., Boston.

## Gas Exhausters.

B. F. Sturtevant Co., Boston.

## Gearing.

Birmingham Iron Foundry, Derby, Ct.

Farrel Foundry &amp; Mach. Co., Ansonia, Ct.

## RUBBER MACHINERY.

## Generating Sets.

B. F. Sturtevant Co., Boston.

## Grinders.

Birmingham Iron Foundry, Derby, Ct.  
Farrel Foundry & Mach. Co., Ansonia, Ct.  
William R. Thropp, Trenton, N. J.

## Hangers.

Farrel Foundry &amp; Mach. Co., Ansonia, Ct.

## Heating Apparatus.

B. F. Sturtevant Co., Boston.

## Hose Covering Machines.

New England Butt Co., Providence, R. I.

## Hose Making Machines.

Birmingham Iron Foundry, Derby, Ct.

## Hose Wrapping Machines.

A. Adamson, Akron, Ohio.

Birmingham Iron Foundry, Derby, Ct.

## Hydraulic Accumulators.

Birmingham Iron Foundry, Derby, Ct.

Farrel Foundry &amp; Mach. Co., Ansonia, Ct.

## Lasts (Rubber Shoe).

Middlesex Last Co., Boston.

## Lathes—Hard Rubber.

A. Adamson, Akron, Ohio.

## Lathes—Jar Ring.

A. Adamson, Akron, Ohio.

Birmingham Iron Foundry, Derby, Ct.

William R. Thropp, Trenton, N. J.

## Machinists' Tools.

Hoggson &amp; Pettis Mfg. Co., New Haven, Ct.

## Mechanical Draft.

B. F. Sturtevant Co., Boston.

## Mixers.

Birmingham Iron Foundry, Derby, Ct.

Farrel Foundry &amp; Mach. Co., Ansonia, Ct.

William R. Thropp, Trenton, N. J.

## Motors (Electric).

B. F. Sturtevant Co., Boston.

## Moulds.

A. Adamson, Akron, Ohio.

Birmingham Iron Foundry, Derby, Ct.

Hoggson &amp; Pettis Mfg. Co., New Haven, Ct.

Holmes Bros., Chicago, Ill.

## Pillow Blocks.

Farrel Foundry &amp; Mach. Co., Ansonia, Ct.

## Post Hangers.

Farrel Foundry &amp; Mach. Co., Ansonia, Ct.

## Presses (for Rubber Work.)

A. Adamson, Akron, O.

Birmingham Iron Foundry, Derby, Ct.

Boomer &amp; Boschert Press Co., Syracuse, N. Y.

Edred W. Clark, Hartford, Ct.

Farrel Foundry &amp; Mach. Co., Ansonia, Ct.

William R. Thropp, Trenton, N. J.

## Pumps.

Birmingham Iron Foundry, Derby, Ct.

Boomer &amp; Boschert Press Co., Syracuse, N. Y.

Farrel Foundry &amp; Mach. Co., Ansonia, Ct.

## Racks for Boot and Shoe Cars.

Hoggson &amp; Pettis Mfg. Co., New Haven, Ct.

## Reducing Valves.

Mason Regulator Co., Boston.

## Rollers.

Birmingham Iron Foundry, Derby, Ct.

Farrel Foundry &amp; Mach. Co., Ansonia, Ct.

## Rollers (Hand).

Hoggson &amp; Pettis Mfg. Co., New Haven, Ct.

Holmes Bros., Chicago, Ill.

## Rubber Covering Machines.

New England Butt Co., Providence, R. I.

## Separators.

Turner, Vaughn &amp; Taylor Co., Cuyahoga Falls, Ohio.

## Shafting.

Birmingham Iron Foundry, Derby, Ct.

Farrel Foundry &amp; Mach. Co., Ansonia, Ct.

## Special Rubber Machinery.

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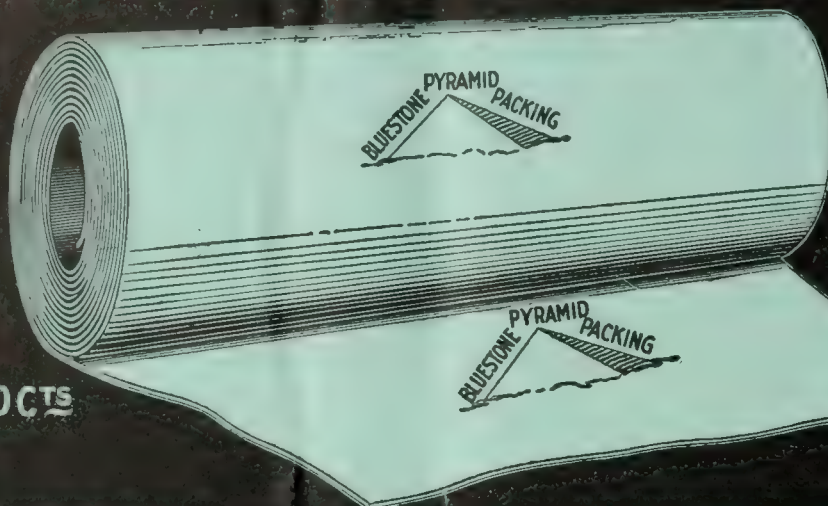
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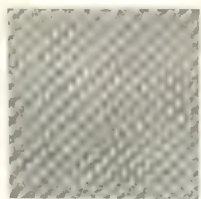
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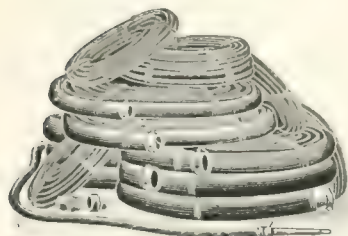


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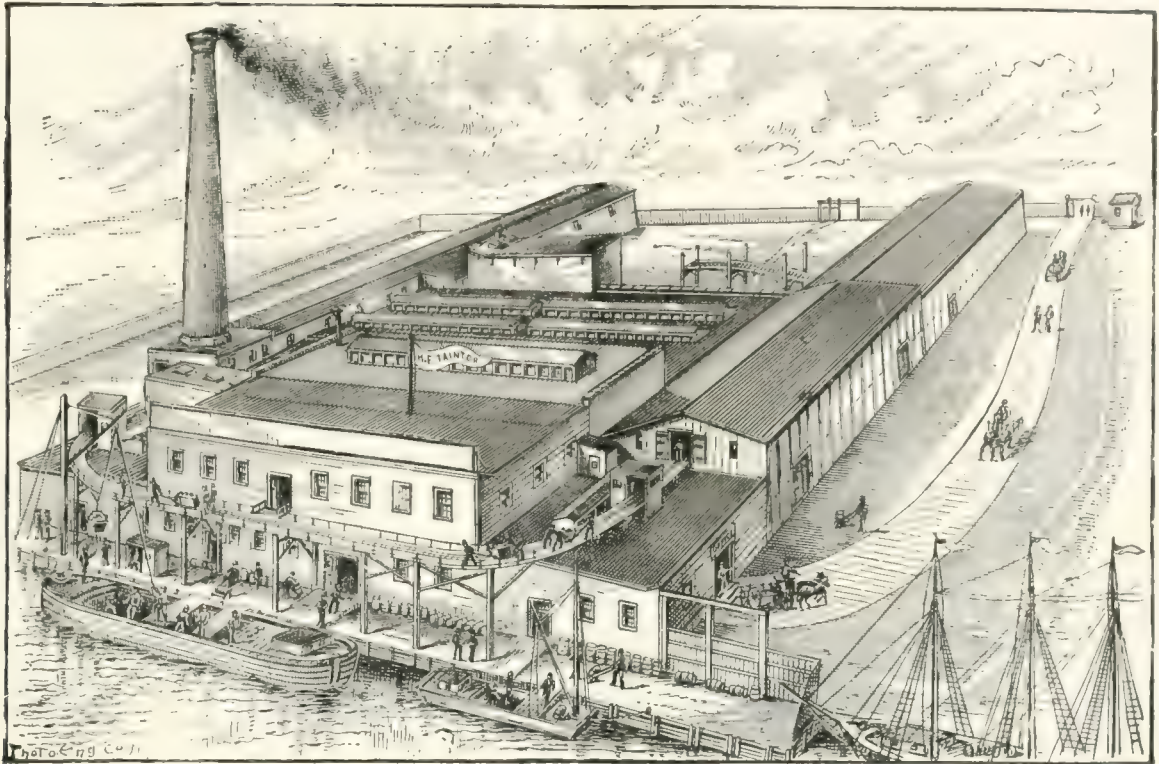
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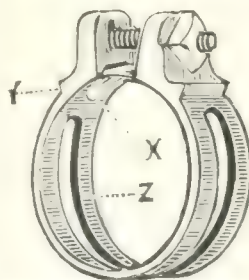
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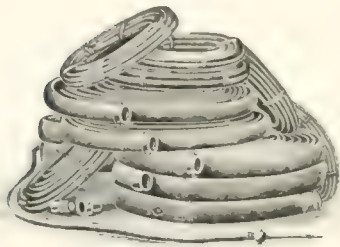
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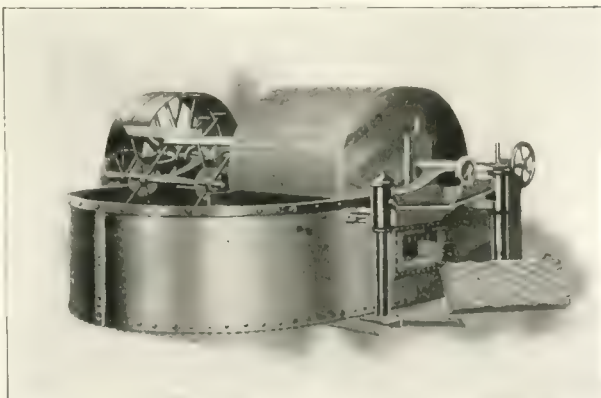
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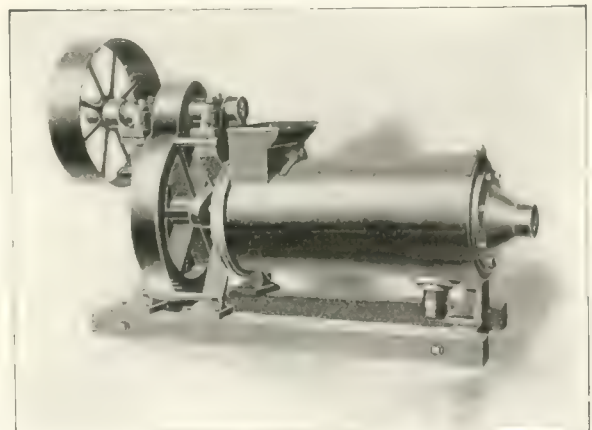
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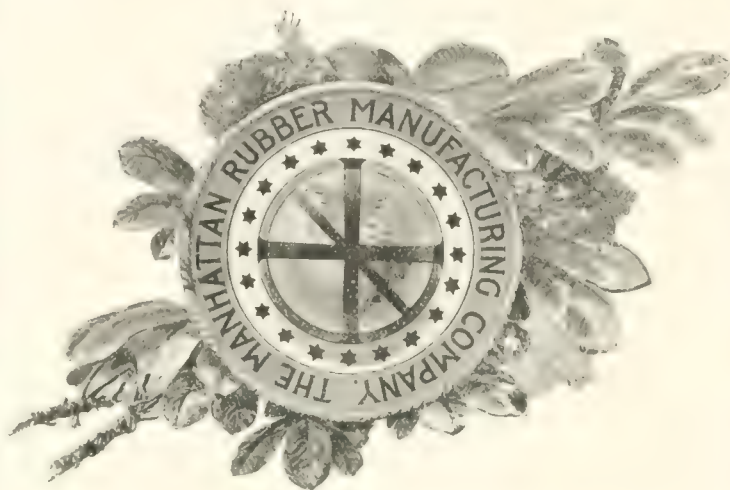
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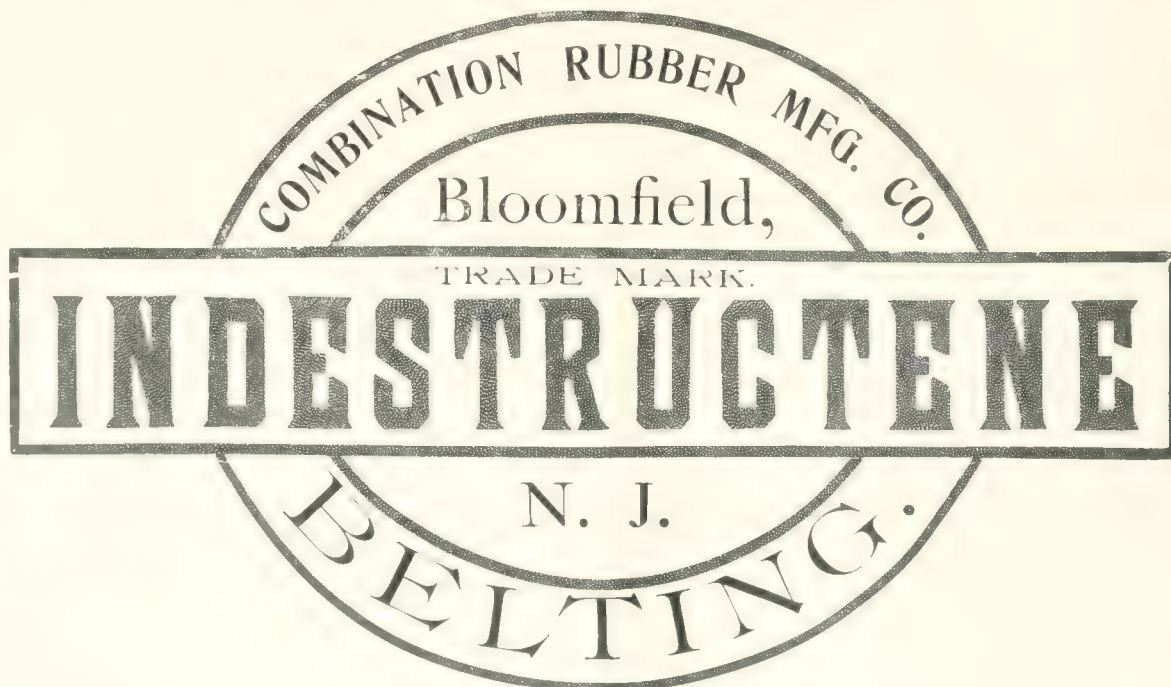
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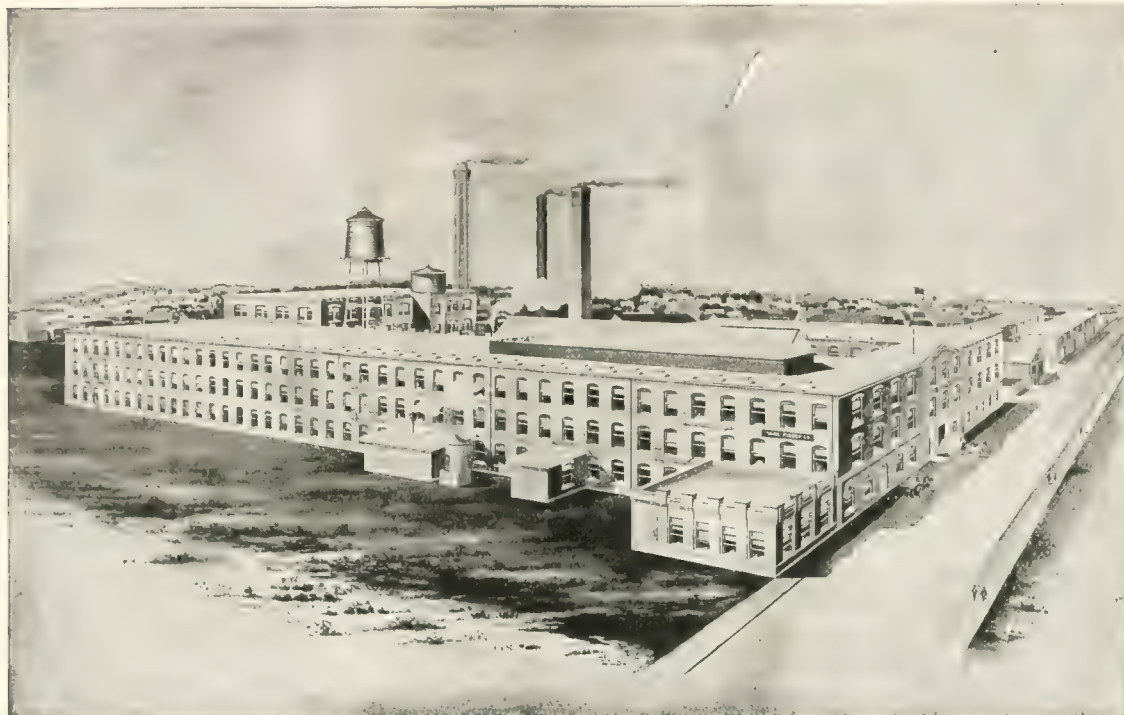
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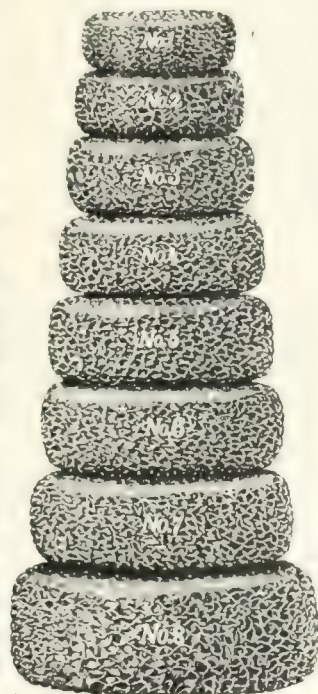
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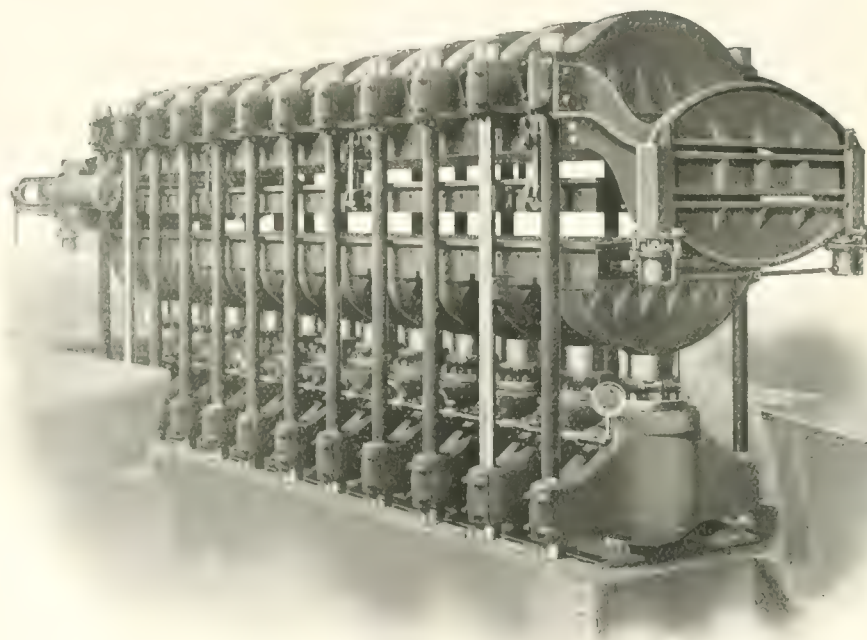
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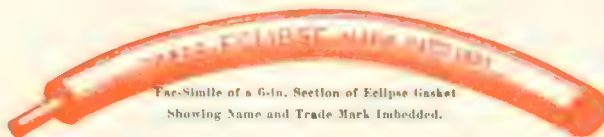


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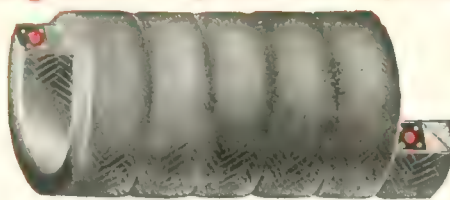
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## THE VALUE OF THE JOBBER.

THE jobber in almost any line at the present time is apt to have his moments of doubt as to whether, coming as he does between the manufacturer and the retailer, he is an absolute necessity. The fact that certain makers of goods deal direct with the retailer, and many times with the individual purchaser, leads him to wonder if his position is secure and permanent. This thought has come to the front in a very marked degree in the grocery line, the jobbers of which bemoan the disposition of the manufacturer to ignore them in the distribution of his products. This does not necessarily mean the elimination of the jobber, but it does urge him to new methods of distribution and a closer touch with the retailer. Above all, it means that there should be no antagonism or any fighting with the maker of the goods.

The sagacious jobber is the one who, to begin with, gets closer to the manufacturer, proves that he has an organization better adapted for the distribution of goods than the manufacturer can hope to obtain without much costly effort, and that he markets goods at a profit that does not invite the latter's competition. There is no doubt, in the rubber trade, at least, that the jobber is still a necessity and is the most natural and effective medium between the manufactured products and cash returns.

To-day, with crude materials so abnormally high, and where such an amount of capital is required to run even a small business, this point is one that should have great weight. Further than this, the credit system in a well equipped jobbing house is an evolution of much thought and experience, and is a sort of insurance for which the manufacturer pays a very small premium.

## COMMON SENSE SPECIFICATIONS.

THE simplest form of selling rubber goods is, of course, by sample, a manner that endured for a long time in the early days of trade. With the increase in the volume of business and with, supposedly, a greater knowledge of India-rubber on the part of the purchaser, specifications came into vogue. Indeed, it was necessary. Great corporations and governments buying large quantities of certain types of rubber goods found it best to institute certain tests, which should signify, in a measure at least, the quality in such goods. Many of the simpler tests were most excellent; many others imposed a hardship upon the manufacturer and were absolutely useless either to buyer or seller.

Specifications that have been made up by a purchaser only partly familiar with the manufacture of rubber goods are bound to be full of inaccuracies. Nor is it always the makers' fault. The only actual test is service, and even that under varying conditions will give widely varying results. What then can be expected where artificial tests are supposed to define the actual status of the goods under consideration? Friction which strips so many parts of an inch under pull of a 25 pounds weight may be passed as above grade, and yet three months later be absolutely



worthless. The purchaser who insists that 40 per cent. of Pará rubber be the basis of his compound may be grossly handicapping the manufacturer who would get infinitely better results by the mixture of two or three different kinds of rubbers, and so on.

It is to be noted in this connection, however, that there is a marked tendency on the part of those who make specifications to simplify them as much as possible, to cut out the freak clauses, that give some one manufacturer an unfair advantage over the others, and to allow only responsible firms a chance to bid for their business. This is just as it should be, and marks a long step in advance over the old time method of procedure.

### RUBBER GOODS IN THE TROPICS.

PEOPLE who send goods made of India-rubber to the tropics—that is, manufacturers—are apt to labor under the impression that the better the quality, the longer the article lasts. This is the truth only to a degree. In the line of mechanical rubber goods, the better grades outlast the inferior, but when it comes down to wearing apparel, such as mackintoshes, the reverse is the rule.

On one occasion, before taking a long tropical trip, the writer provided himself with the very best grade of light tan-colored pure gum coat that he could obtain. This was of American make. He also purchased a light weight double texture mackintosh made by an English house renowned for the quality of its goods and advertised as particularly adapted for use in the tropics. Both of these garments softened and became very sticky under the intense, moist heat near the equator. In the double textured article, wherever cement had been used, it worked through the cloth and the pockets stuck together so tightly that they were useless.

In talking with those who handle rubber goods in the tropics, the experiences cited are said to be every day occurrences. The rule seems to be that the heavily compounded goods stand the climate best. A high grade of fine, white sheeting turned very yellow, but was otherwise unaffected. Druggists' sundries in white rubber stood just as well as they did in the temperate zone, but the pure gum goods were very apt to soften and deteriorate.

JUST ABOUT THIS TIME OF YEAR, that is, the beginning of the dry season in the tropics, there is a general hegira of presidents, vice presidents, treasurers, and inspectors of rubber plantations toward the southland. If a census of foreigners were taken to-day in Mexico, the *tierra caliente* would be shown to contain many hundreds of Americans, all interested in rubber. By April, at the latest, the most of them will be back with many photographs, much personal experience, hundreds of insect bites, and, let us hope, with the report that many companies are beginning to market cultivated rubber.

THE ALLEGED PROPHECY MADE BY ANDREW CARNEGIE, that the coming men of power would be rubber millionaires, is already being fulfilled—says the *Boston Record*. That excellent and usually accurate paper goes on to remark that the late Sir Henry M. Stanley left a fortune, consisting largely of rubber plantations in Central Africa. Both of the above statements would be much more interesting and valuable were they true. THE INDIA RUBBER WORLD long ago inquired of Andrew Carnegie if he ever made such a statement, and he said

he never did. Further than this, up to the present time, the rubber planting that has been done in Africa appears of very doubtful value, and if Stanley's possessions consisted only of the aforesaid rubber plantations, the money that he left would fall very short of even one million.

THERE MUST BE SOMETHING IN RUBBER PLANTING after all, because many rubber manufacturers, for a long time skeptical, are beginning to ask questions about the progress of plantations in the Far East and in the countries to the south of us; but an indication more sure than that is that during the last three months not a few brokers and importers have been seeking lists of rubber plantations. Not quite convinced, perhaps, but sitting up and taking notice.

### LITERATURE OF INDIA-RUBBER.

DER PYROGENE ZERFALL DES KAUTSCHUKS. ÄLTERE UND NEUERE STUDIEN ÜBER DIE PRODUKTE DER TROCKENEN DESTILLATION DES KAUTSCHUKS von Dr. Rudolf Ditmar, Graz. Dresden: Steinkopff & Springer. 1904. (Paper. 8v. Pp. 41. Price, 1 mark.)

IN this brochure the author gives a compilation of all the known facts regarding the destructive distillation of Caoutchouc and the substances produced therefrom. The introduction enumerates the principal works in print containing references to the subject. Detailed literary references on the pyrogenous dissolution conclude the brochure. In the compilation of the researches on the products of distillation of Caoutchouc Dr. Ditmar has undertaken a very laborious work, well worthy of consideration; he has studied the various fragmentary articles, appearing from time to time in the publications of the branch, thoroughly, and excerpted them in detail. Not alone the rubber chemist, but organic chemists in general will welcome this little work, which forms a contribution of distinct value to the literature of the chemistry of rubber. The whole forms a reprint of papers first published in the *Gummi-Zeitung*.

KAUTSCHUKGEWINNUNG UND KAUTSCHUKHANDEL AM AMAZONSTROME. Von E. Ule. Supplement to *Der Tropenpflanzer*, Berlin, January, 1905. [Pp. ii + 71, maps.]

THE expedition of Ernst Ule to the rubber districts of the Amazon, the results of which were first contributed through the *Natizblatt* of the royal botanical gardens and museum at Berlin, has been noticed already in these pages. It was doubtless the most thorough exploration of the field yet made by a competent observer, and its results cannot fail to prove of much ultimate benefit. The former reports were contributions to botanical knowledge, whereas the present work, while enumerating the rubber producing species of the Amazon, is devoted largely to the commercial aspects of rubber gathering and the export of rubber. The source of the Amazon rubber commercially known as "Cauchó" is treated in a more satisfactory manner than by any previous writer, the tree having been recognized as a distinct species of *Castilloa*, which is designated by Dr. Otto Warburg, in honor of the explorer, as *Castilloa Ulei*.

### IN CURRENT PERIODICALS.

LES Plantes à Caoutchouc du Sud-Annam. By Monsieur Vernet, chemist to the Pasteur Institute in Nha-trang. [Report on four rubber yielding *lianes* (climbers), recently discovered in French Indo-China, and considered valuable and susceptible of cultivation: *Ecdysanthera Langhansii*, *E. latifolia*, *Homalium* sp., *Pectis pycnantha*, and *Chonemorpha* Y. m. Illustrated.] = *Bulletin Économique*, Hanoi. VII 35 (November, 1904). Pp. 1174-1206.

Sur les *Castilloa* du Costa-Rica. By H. Pittier de Fabrega. [Discussion of the question of species.] = *Journal d'Agriculture Tropicale*, Paris. V-43 (January 31, 1905). Pp. 14-17.

## MORE ABOUT "POZELINA."

THERE appeared in the January 1 issue of this Journal (page 116) an article headed "The Merits of Pozelina," the purpose of which material, in connection with the coagulation of rubber, is further indicated in the following letter since received from the proprietor, in Pará:

TO THE EDITOR OF THE INDIA RUBBER WORLD: I am in receipt of your favor of December 8 last, to which I beg to reply. I note the interest you have taken in learning something further about "Pozelina" than the information contained in our advertisements in the *Folha del Norte*, and for the purpose of complying with your wish, I beg to state that Pozelina is the invention of Mr. Thomas Cantuaria, an old rubber tree explorer, who discovered it after long continued and careful experiments. Its principal property is the preservation of the rubber milk in a perfectly fluid state during the time required for its transportation to the factory where it can be conveniently fumigated. An experience of more than 20 years has shown that crude rubber prepared with the aid of Pozelina possesses greater elasticity and is more homogenous, and for these reasons it is always quoted higher in the market. Pozelina is now in general use, its cost being 4000 reis per can of 500 grams. The contents of a can are sufficient for the preparation of 50 kilos of crude rubber.

[NOTE—With exchange at 12 pence per milreis, these figures afford the following equivalents: Cost of Pozelina, 85.3 cents or 3v. 7½d. per pound in weight, this quantity being sufficient for 100 times the weight in dry rubber.—THE EDITOR.]

Besides this preparation Mr. Thomas Cantuaria is likewise the inventor of an apparatus for the preparation of crude rubber, by which fumigation becomes unnecessary. This apparatus has been in use for more than 20 years, and produces excellent results.

As Mr. Thomas Cantuaria's preparations are in general demand, a number of more or less clumsy imitations are being offered under different names and with an extraordinary amount of advertising, to which I call your attention because you advocate the interests of the rubber trade.

Hoping to have satisfied your wish, and assuring you that I shall always be at your service, I remain yours very truly,

A. J. A. DE MAGELHAES.

Pará, Brazil, February 1, 1905

## AND NOW COMES "SERINGUINA."

ANOTHER correspondent at Pará sends to THE INDIA RUBBER WORLD a copy of a printed circular relating to another material offered for assisting rubber workers in the process of coagulation, called "Seringuina" by its inventor, Dr. Cerqueira Pinto, of Pará. The statements of the circular, translated from the Portuguese, and condensed somewhat, are as follows:

Seringuina is a chemical product used for retarding, for any desired time, the coagulation of the *latex* of rubber and related trees, and producing, after the smoking process, a fine and pure rubber. Seringuina contains no potash or corrosive substances. In the fumigating process to which the rubber milk is subjected, the Seringuina, when exposed to the heat of the smoke, evaporates entirely.

The rubber gatherers whose *estradas* are at long distances from their camps, and who therefore cannot promptly smoke their rubber, resulting often in the curdling of the milk, will find Seringuina of great utility. It is sufficient to put a large pinch of Seringuina into each vessel of *latex*, to keep the latter in a fluid condition for 24 or 30 hours after it has left the tree. The fumigation, therefore, may be done at leisure.

In localities having no fuel for fumigation, Seringuina is

likewise of inestimable value. By preparing the milk with a small quantity of Seringuina and leaving it to coagulate in forms, a very fine elastic *sernamby* is obtained, having often all the properties of fine rubber.

When, for some unexpected reason, *latex* treated with Seringuina curdles, either because the quantity used was too small for the time during which it was to preserve the milk, or on account of the exposure of the latter to the sun or to artificial heat the resulting *sernamby* (coarse rubber) possesses excellent qualities.

## RECENT REPORTS REGARDING "GUAYULE."

THE *Berliner Börsen Courier* learns that a syndicate consisting of the Dresdner Bank, the Deutsche Effekten- und Wechselbank (Frankfort o/M.), the Vereinigte Gummiwaaren-Fabriken Harburg Wien, and a large firm of exporters, having houses in London and Mexico, has converted a Mexican rubber factory into a stock company, with a capital of £100,000. The rubber works in question are manufacturing rubber from "Guayule" herbs, and have already obtained satisfactory results. Their products have been introduced into Europe and are said to have found a good reception on account of the scarcity and increased price of crude rubber.

Recent newspaper reports from Mexico relate to the acquirement of certain patents and other interests relating to the exploitation of Guayule, by a company described as L'Anglo-Mexicana, a large commercial organization having its headquarters in Hamburg, and formed originally to trade in *ixtle* and other fibers, both for manufacture and export, and which business is still carried on, being more important at present, of course, than the Guayule product. The company are reported, in a private communication to THE INDIA RUBBER WORLD, to have a capitalization of £400,000. The company are reported to have in view the operation of Guayule factories at San Luis Potosi, Torreon, Saltillo, and Jimulco, near which latter place they are already in actual operation.

The company referred to have acquired the patents of William Prampolini, about whose proposed work with Guayule extravagant reports were current two or three years ago. THE INDIA RUBBER WORLD at that time mentioned the establishment of a factory on a considerable scale at San Luis Potosi, but it cannot be learned that any rubber was ever produced there, and machinery is understood to have been removed from the building. It is not to be understood that L'Anglo-Mexicana are working the Prampolini process; they have simply acquired his patents as a step in controlling the Guayule interest as far as possible. They are reported to have obtained options on the collection of the Guayule plant throughout sections of considerable area around the towns mentioned. It is understood that L'Anglo-Mexicana are not connected in any way with the Continental Rubber Co. (New York), who are mentioned in another column in this issue, and who have done not a little experimental work in Mexico for some time past.

A COMPANY has been registered, under the style of Crotty's, Limited, with £6500 capital, in £1 shares, to acquire the business of Crotty & Co., 62, Grafton street, Dublin, and to carry on the business of India-rubber, Gutta-percha, asbestos, and textile manufacturers. There has not been a rubber goods factory in Ireland hitherto. Messrs. John B. & F. Purchase (London), solicitors of the new company, advise THE INDIA RUBBER WORLD: "Crotty's, Limited, do not at present manufacture India-rubber goods in Dublin, but they have power to do so under their memorandum of association."



## THE COLORADO RUBBER RECORD.

IN view of the continued receipt of inquiries concerning the production of rubber from the Colorado "rabbit weed," a further record is presented herewith of what it has been possible to learn in regard to the development of the new industry. It does not appear that the Colorado product has yet found a place in the crude rubber market.

ONE YEAR AGO. [From the Denver Colorado Times, February 11, 1904.]  
*Special to The Times*

SALIDA, Colo., Feb. 19.—The final deal was consummated this morning between the Salida Board of Trade and Dr. Sol Ringolsky, proprietor of the rubber extraction plant, now at the Modern Machine Works in Denver, whereby the machine will be set up at Salida for the manufacture of crude rubber. The plant will be shipped to Salida within the next few days and set up in the Creamery building, which is well equipped with machinery.

A SECOND START. [From the Denver Colorado Republican, December 15, 1904.]

SALIDA, Colo., Dec. 15.—(Special.)—The work of setting up a rubber extraction plant in Salida was begun this morning by the Salida Crude Rubber Co. The machinery arrived last night, and the new mill will be operated within 15 days. - - - The Salida company has placed a number of workmen in the field who are gathering the root for the new mill.

UNTIRING EFFORTS BRINGING RESULTS [From the Salida (Colorado) Chronicle, December 16, 1904.]

As announced last week, the building for the Salida Rubber Plant has been made ready. A portion of the machinery has arrived, is installed, the fires in the furnaces kindled and the wheels set to flying. The remainder of the machinery is being manufactured as rapidly as possible. Contracts have been placed for the gathering of the rubber weed - - - This is the first and only rubber plant in the world in operation to manufacture rubber from the Colorado weed - - - The untiring efforts of the Salida Board of Trade to promote the possibilities of Salida are bringing results.

THROUGH THE FIERY FURNACE. [From the Salida (Colorado) Mail, January 11, 1905.]

EVERY new discovery of whatever nature is forced to pass through the fiery furnace of adverse criticism. It has to rise on its merits. So it is and has been with the Colorado rubber weed. Since its discovery it has been met with suspicion and has gradually emerged from obscurity into great prominence. Every month brings to light some new value connected with its usefulness.

IN THE FROZEN GROUND. THE SALIDA BOARD OF TRADE.  
*Organized May, 1901.*

SALIDA, Colorado, Feb. 13, 1905.  
THE INSOLOID FUSE CO., LTD.—*Gentlemen:* Your card requesting sample of "Crude Rubber" at hand. The mill for extracting the same has not started up yet and consequently we have none on hand.

The manager says he cannot do much until the ground thaws out so they can pull the plant.

Later on we will be glad to forward rubber. Very respectfully,  
O. J. KENNEDY, Sec. B. of T.

BROOKLYN CAN GET SAMPLES. [From a letter of O. J. Kennedy of the Brooklyn Daily Eagle, to the Editor of THE INDIA RUBBER WORLD, dated January 27, 1905.]

DEAR SIR: Really I do not know why the rubber producers of Colorado do not allow you to see samples of their product. But I do know that I had not the slightest difficulty whatsoever, not only in obtaining all the samples

I wanted, but also in obtaining permission to watch the process of manufacturing the samples.

A HARD RUBBER SECRET.

[From the Salida (Colorado) Mail, January 31, 1905.]

MR. O. J. KENNEDY, secretary of the Salida Board of Trade, has received a communication, dated January 18, from Buffalo, New York, people who wish their names withheld, from which the following extract is taken:

"I am interested in a process for abstracting rubber and Gutta-percha from many different plants, vines, grasses, woods, etc. We have been at work on the process for several years and can produce hard rubber from many substances in paying quantities. We have lately tested the Colorado rubber plant and pronounce it the best material for hard rubber—that is, it will produce it far cheaper than from any other substance of equal sort. We can obtain from this rubber plant a higher percentage than we have ever heard of."

WHAT BROWNELL DID.

[From the Brooklyn (New York) Daily Eagle, December 18, 1904.]

MYRON G. BROWNELL, a Denver real estate man, visited a friend engaged in the sheep business near Buena Vista. The friend had a valuable ram\* that had carelessly been permitted to browse on rabbit weed, and a couple of weeks later died with the usual symptoms. At Mr. Brownell's suggestion a *post mortem* was held on the ram. The stomach was found to be filled with pellets of a black gum. This gum was perfectly indigestible, and so had caused death. Mr. Brownell had some of the substance examined by a Denver chemist, who said it was rubber.

\* For a portrait of the ram, see THE INDIA RUBBER WORLD, January 1, 1905, page 129.

WHAT BROWNELL DIDN'T.

[From the Salida (Colorado) Mail, January 10, 1905.]

ACCORDING to sworn affidavits of witnesses Brownell never dreamed of such a thing as a rubber plant, until Spencer, under promise from Brownell to give him a large bunch of money if he, Spencer, could show him the plant. He took him into the field and pointed it out to him.

## THE CARE OF RUBBER TIRES.

IN view of the great number of automobiles stored during the winter months, the G & J Tire Co. (Indianapolis, Indiana) have issued "A Word of Advice" in regard to the care of tires when not in use, which we take the liberty of reproducing:

Extreme cold will not damage tires in any way, but great variation from heat to cold is injurious to tires which are not in use. Therefore, if a car is stored in a room that is artificially heated, the temperature should be kept as even as possible.

If the car is stored in a light place, it will be well to cover the tires to protect them from the strong light, which has a deteriorating effect on rubber.

The greatest injury that can be done to tires on a car stored for the winter, is to allow the weight of the car to rest on the tires. The car should be blocked up, so that no weight is borne by the tires, and the tires should then be deflated partially. This will relieve the tires of all strain, so that in the spring they should be no worse for their winter's storage.

F. B. PARKS, of No. 173 Prescott street, Grand Rapids, Michigan, the patentee of an inner tube for tires which is designed to be non puncturable, or at least self healing to a degree hitherto unknown, has contracted for its manufacture by the Alden Rubber Co. (Barberton, Ohio). Before making this arrangement Mr. Parks, who is the patentee of several other rubber specialties, had attempted to organize a company in Grand Rapids to make his tire.

## A GLIMPSE OF JAPAN AND ITS RUBBER INDUSTRY.

By The Editor of "The India Rubber World."

THIS story begins in Nagasaki harbor, where lay the steamship *China*, with a varied assortment of Americans, Germans, English, Koreans, Chinese, Japanese, and one full fledged Russian spy for passengers. The harbor is one of the prettiest in the world; it is quite narrow, some three miles in length, with many bays and sheltered by wooded hills. The entrance, scarcely a quarter of a mile in width, is between a number of islands on which stand modern lighthouses. After the polite little Japanese health officers got through with us, we went ashore, hired rickshaws at 20 sen an hour, and rode about the town.

Everybody knows that the climate of southern Japan is lovely—that it is a land of cherry blossoms, with flowers blooming everywhere, and the happy laugh of the contented coolie is heard on every hand. At least that is what the books say, but truth to tell we rode through one thick snow squall after another, and the whole town shivered in its paper houses, while the people on the street looked blue and discouraged. We got back in time to see a great crowd of coolie girls coaling the ship. Some sort of conveying belt or mechanical apparatus might have been more modern, but it could not have been cheaper, quicker, or more picturesque. Passing the coal up in baskets from hand to hand, they put 1300 tons into the hold between 10 in the morning and 2 in the afternoon.

When this was finished, we went ashore again for a short time to see the big bronze horse in front of one of the temples, which, so we were told, was left there one night by an angel that brought it down from heaven. The angelic sculptor must have been Japanese, for his work was characteristic of the country. Almost at once we were struck by the prevalent ambition of the people to improve themselves. Very many spoke English and wisely improved every occasion to practice it. One of our passengers, a sedate Englishman, was first astounded and then convulsed when a young Japanese student approached with a text book of conversational English in one hand, raised his hat, and said pleasantly:

"Good morning sir or madam as the case may be!"

The day following was a memorable one, for the course of the boat took us through the beautiful inland sea, with its picturesque mountains, sugar loaf islands, and silvery beaches, with here and there quaint Japanese fishing and farming towns and many trading junks and fishing boats, big and little. The sea was smooth, the sun bright, but the wind cold enough to call for an overcoat. The total number of islands in this sea is not known, but it runs into thousands, of every conceivable shape, some wooded and some mere barren rocks, some with tiny villages on them, others with but a lonely shrine. Scattered in

all directions are they, but often lying so close together that there seems to be hardly room for the steamer to pass. In the wider reaches the water is very smooth, but in the narrow ones the current boils and eddies so that the utmost care is necessary to take a vessel through in safety.

When we got to Kobe a friendly merchant sent a steam launch to the ship and took us off early in the morning, giving us time to ride to the Sannomiya station and catch the train for Kyoto. The last named city is nearly 50 miles from the coast, and the journey gave us an excellent opportunity to see the Kamigata district. The land was far from rich naturally, but every inch of arable surface was cultivated, irrigated, and plotted off into what looked like thousands of toy gardens, the farms extending far up the sides of the mountains. Along the wayside were huge billboards on which were pasted the same kind of advertisements that one sees at home, along a railway, only in Japanese instead of English.

We passed through the great city of Osaka and finally

reached Kyoto, where a three mile rickshaw ride, all the way up hill, the vehicle being drawn by one coolie and pushed by two others, took us to the Miyako hotel, where we had breakfast served by the prettiest waitresses imaginable. Pottery and porcelain are the chief manufactures here, the goods being largely for export. In visiting the works we were shown every attention, the choicest and most fragile articles being brought out for inspection. A line of work that is a specialty in this city is the famous Cloisonné product, usually made in a private house by the owner and two or three apprentices. It consists of



A VIEW OF THE INLAND SEA.

copper vases, etc., on which are brazed bits of gold, silver, and other metals, the result being most beautiful. One little vase that I coveted was marked 20 yen. I offered 8 and was firmly turned down. That evening, however, the manufacturer boarded the train as I was leaving, and, explaining that, I was not remaining in town to publish his hame, it was mine at 8 yen.

For some reason it was not possible to visit the great Nijo castle, so we rode out to and around it. This palace castle, erected in 1569, is noted as the place where in 1868 the present mikado granted to Japan a full deliberative assembly, and the right to decide all measures by public opinion. The outside of the castle is grim and fortress-like, but within it is said to be a dream of golden magnificence.

San-ju-san-gen-do, the temple of the 33,333 images of Kwan, the Goddess of Mercy, and the great Daibutsu, (an image of Buddha consisting of head and shoulders only, yet 58 feet high), were visited in turn. We trod musical floors made of polished planking that gave out a faint sweet sound, rung the 63 ton



bell in the temple of Moho-in, visited the Buddhist, Shinto, and Zend temples until, satiated with bronzes, paintings, and sight-seeing, we rode back to the hotel for rest and dinner. Later we took a funny little sleeping car and started for Yokohama.

In the morning we said *Ohio* to each other and looking out saw the holy mountain, Fujiyama, and half an hour later had breakfast in Yokohama. It was then that my friend, Mr. Okada, of the Fujikura Insulated Wire and Rubber Co., of Tokio, looked me up and took charge of my itinerary. With such a guide the whole of Yokohama and the nearby great city of Tokio was most interestingly and easily developed. We visited temples, places of amusement, and shopped, and he capped it all by inviting me to dinner *à la Japonaise*. One of the pleasantest memories of my trip is that meal served in an elegant tea house where servants knelt and bowed themselves to the floor as we rode up, took off our shoes and shod us with gaily colored socks, then led us up a staircase of teak, polished like a mirror, into a dining room, carpeted with squares of straw matting inches in thickness and as soft as velvet. There seated on the floor, with a pair of chopsticks in one hand, I enjoyed a meal that for service and cooking cannot be surpassed anywhere. Nor must I forget the two charmingly dressed Geisha girls that were summoned by my host to dance typical Japanese dances, which he described to me so that they were not only understandable but most modest and beautiful.

My visit to Tokio, accompanied by Mr. Okada, was primarily to view his rubber factory and also to meet other members of the firm. My courteous host was full of regret that the factory was not at its best, as only a little while before my arrival a hurricane had demolished many of the buildings. However, he showed me what he had, and as repairs were being rushed rapidly, it was easy to see that it would soon be in first class shape again. I was very much interested to know about office hours, etc., and my host was exceedingly frank. His day's work began at 6 o'clock, with one-half hour for breakfast at the factory, another one-half hour for lunch in the middle of the day and an hour, still at the factory, for dinner in the evening, followed by work in the factory until 10 o'clock at night. This was his daily routine, and he had followed it for three years, with no Sundays or holidays out, and as far as I could see he was in the pink of condition.

His review of the rubber industry in Japan was most in-

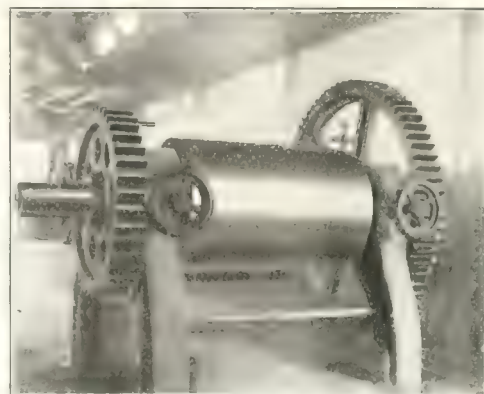
teresting. Seven companies are engaged in the manufacture of rubber and are as follows: Tokyo Gomu Seyzo Kaisha, The Meiji Rubber Manufacturing Co., Mitado Rubber Co., Nippon Rubber Co., and Fujikura Insulated Wire and Rubber Co., in Tokio; the Yokohama Insulated Wire Co., in Yokohama, and the Osaka Jushi Sheizosho, in Osaka.

The largest of these is the Tokyo Gomu Seyzo Kaisha. It is also the oldest, being nearly 25 years old and employing some 250 hands. Their line of manufacture is mechanical rubber goods such as valves, gaskets, packing, and hose, their *Pará* rubber coming from New York, while some other grades are imported directly from Java, Sumatra, Borneo, and Saigon. All of the machinery was made in Europe. In this connection it may be of interest to recall that some of the first rubber machinery made in Japan was designed by an ambitious rubber manufacturer there from illustrations he found in a mechanical dictionary. In the washer roll the corrugations were finer than is usual, but it washed rubber perfectly. The mixer would mix a small batch, but as no provision was made for heating or cooling the rolls, and as they were not proportioned as well as they might be, the machine could hardly be called a perfect one. Considering the material with which the manufacturer worked, however, both washer and mixer are veritable triumphs.

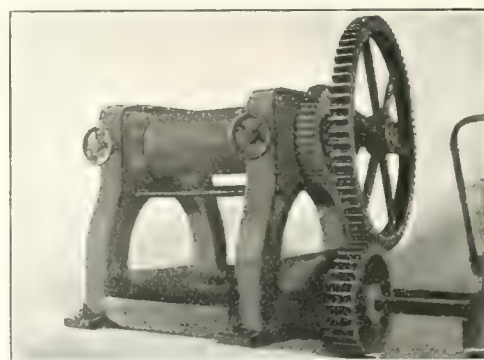
The rubber industry is not a large one. There are no boots and shoes manufactured, no clothing, very few druggists' sundries, and no hard rubber. Insulated wire is the chief product, followed by minor mechanical rubber goods, mold work, and some of the smaller novelties; for example, the Nippon Rubber Co. manufacture the rubber soled shoe shown in the illustration. There are, by the way, three types of shoes worn by the Japanese; the *zori* or straw sandal; *tabi*, or stockings, with a separation between the great and the other toes; and the *setta*, or wooden clogs. The rubber sole was made by some enterprising Japanese for the straw sandal and was really a good piece of mold work. The most interesting bit



BAMBOO LINED ROAD NEAR KYOTO



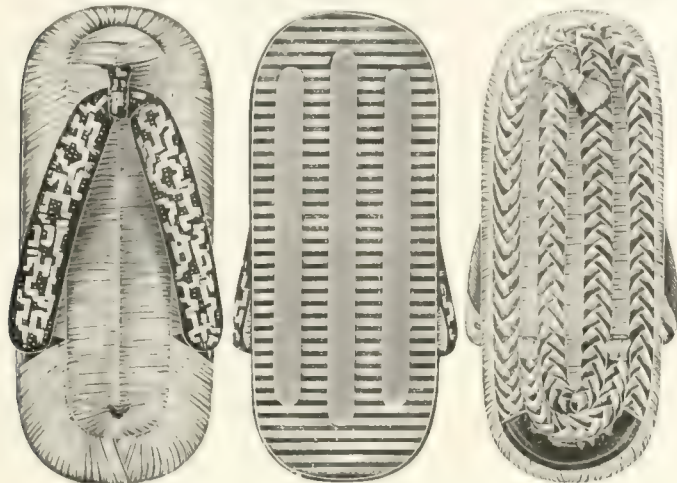
JAPANESE RUBBER MIXING MILL.



JAPANESE RUBBER WASHER.



of work, however, was the molded sole to fit the bottom of the *tabi*. That, so I was informed, was patented by the Nippon Rubber Co. The Oriental Rubber Co. started to make them, and, suit being brought, the court decided that the patent could not be sustained, as the sole was practically the same as



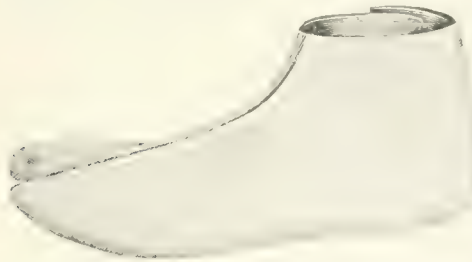
View of Upper,  
Made of Straw.

Rubber Sole  
ZORI, OR STRAW SANDAL.

Straw Sole and  
Gutta-percha Heel

the tennis soles that had long been made in America.

There appeared also to be the beginning of a business in tires, chiefly of the solid type, for the rickshaw. Indeed, I was informed by an intelligent native that ere long the rickshaws through Japan and in the coast cities of China, Malaya, and southern India, would be fitted with pneumatic tires of Japanese make. During my journey, it was very apparent that the few rickshaws that were fitted with pneumatic tires



TABI (COTTON SOCK).

were always in use and far more agreeable to ride in than those without. One of the rubber manufacturers whom I met was deeply interested in the subject of rubber planting, and pointed out that if rubber could be grown in Formosa, with the cheap labor so abundant in Japan and so easily controlled, in a possession belonging to the country, it would be a most profitable venture. Since my return to America, in looking the matter up, I have no hesitation in saying that there are parts of Formosa that would lend themselves most readily to such cultivation, and I hope soon to hear that the Yankees of the East have begun to plant.

Manufacturers in the United States often look askance at Japan, wondering what that country will be industrially when it fairly wakes up. From my own observation I do not think the rubber trade, at least, need fear Japanese competition for some years to come. For their own needs, they will doubtless soon make the most of their own goods, but when it comes to entering the markets of the world, they will be facing a different problem. The need of great numbers of workers skilled

in rubber will be one that will not be easily supplied. The Japanese are exceedingly ingenious, marvelously industrious, but the cheap labor, cheap though it is, is not to be compared with the high priced skilled labor employed in America.

The traveler in Japan is constantly confronted by the fact that he is in a country where the point of view is radically different from his own. For example, a burglar in one of the large cities robbed a man of 200 yen. He was apprehended later and, 40 yen being found on his person, it was given to the man whom he had robbed. A little later the robber appealed to the court and proving that he had spent the whole of the money he stole, and that the 40 yen was money of his own, he recovered the whole of it.



RICKSHAW PULLER, WITH STRAW RAINCOAT.

[An exceedingly cheap article, the use of which renders the demand small for rubber proofed clothing.]

My stay in Japan was necessarily brief. All the way from Singapore there had been war rumors; the Japanese passenger boats had been recalled to Japan, the American officers paid and sent home, and although the Japanese were very reticent and refused to discuss the possibility of war with Russia, no one doubted that the outbreak was near. Rather than be delayed in my journey home, I cut my visit short and embarked on the *China* for the Sandwich islands. Three days later war was declared, with what result all the world knows.

When a Japanese buys a pair of *tabis* or *soris* the enterprising retailer wraps up the purchase in a thin paper circular which tells in detail of his unsurpassed stock and his desire for trade, just like our own retailer.

衛生護謄裏雪駄  
弊店販賣の雪駄は足當り柔らかく衛  
生上最も必要であつて  
宝省学校會社病院船  
中等の上履ふに極適當  
と護謄三田土合名店  
社の撰製あつて持久の力普  
通麻裏の幾倍なること使用  
諸君の証明せらるゝ處なり  
良護謄裏足袋



FAC SIMILE OF A JAPANESE CIRCULAR.



## RUBBER PLANTING AND EXPLOITATION.

## THE RUBBER PLANTING INTEREST IN CEYLON.

FRANCIS J. HOLLOWAY, manager of the Kepitigalle estate, Matale, Ceylon, writes to *The Times of Ceylon*: "During the past five years I have devoted a great deal of my time to rubber cultivation and curing, and during the year 1904 this estate has enjoyed the distinction of having the largest sale of seed and output of rubber of the island. We know that Pará gives over two pounds per tree in its tenth year, planted 15×15, or say 200 trees to an acre, and that it can be delivered in Colombo under 50 cents [=16.4 cents, gold] per pound and is selling at present in Colombo for between 4.15 and 4.20 rupees [= \$1.34½ to \$1.36] per pound."

These figures, compared with even the highest prices quoted for Ceylon rubber at the London auction sales, say 6s. 1d. [= \$1.48] would show that the margin of difference in price between the primary and consuming markets is very narrow, after the transportation cost is figured. Speaking of the Colombo market, the *Times* intimates that one or two houses there may take up the rubber export as a specialty, the output of the island having gone up last year to 72,000 pounds, with the prospect of a steady increase.

Writing later to *The Times of Ceylon*, the owner of a 300 acre rubber plantation, now three years old, says that selling rubber at present prices equals £100 profit per acre yearly, and that, capitalizing this at 10 gross purchase, gives a valuation at £1000 per acre, or £300,000 for the estate, and he asks whether such valuation would be justified.

F. S. Penfield, an American visiting Ceylon, through *The Times of Ceylon* advises planters there, in taking up new cultures, to give a preference to rubber rather than to cotton, for the reason that while cultivation may ultimately result in overproduction of rubber, the stage of overproduction of cotton has been reached already, and that a liberal rate of profit from cotton planting is no longer to be looked for as in the case of rubber.

\* \* \*

THE Kalutara district was visited early in January by their Excellencies Sir Henry A. Blake, governor of Ceylon, and Lady Blake. At Tebuwana an address was presented by the Kalutara Planters' Association, pointing out the progress made in the development of that district, and the still further growth hoped for in connection with rubber planting, and requesting consideration of means for improving the facilities for transportation. At a breakfast tendered to the official visitors Mr. C. Henly, chairman of the planters' association, said that, while profits on tea were lower than formerly, "I do not think that there is any chance of our district being abandoned just yet. We have a new product in rubber which promises to do very well, and in which very large extensions are now taking place. About 1100 acres were under this product alone at the end of 1903, some 2000 acres were planted in 1904, and much larger extensions are being made this year." Sir Henry expressed in his remarks to the association a lively interest in the prospect of profits from rubber, and afterwards spent some time in conversation with the planters on this subject. Their Excellencies next proceeded to Arapolakanda estate, owned by the Eastern Produce and Estates Co., Limited, where they were received by Mr. H. V. Bagot, the superintendent, and had an opportunity of seeing rubber trees tapped and the latex converted into commercial rubber. They were entertained over night on Narthupana es-

tate, at Neboda, at the residence of Mr. R. Morison, the superintendent.

\* \* \*

MR. THOMAS PETCH, B. A., has been appointed government mycologist, to succeed Mr. J. B. Carruthers, whose work in relation to canker in rubber is well known to our readers, and whose transfer to the Federated Malay States was reported in the last issue of this Journal. Mr. Carruthers, by the way, paid a visit to England before taking his new post in Malaya.

=The Muwankande Coconut and Rubber Co. of Ceylon, Limited, formed with an authorized capital of 300,000 rupees [\$97,200], to acquire and develop Muwankande estate, in Kurunegala. The property embraces 746 acres, of which 320 are reported to be under cocoanuts from one to nine years, and 73 in Pará rubber, planted in July, 1904. It is proposed to add 80 acres to the coconut area and to plant 273 acres in rubber. It is stated in the company's prospectus that the cocoanuts alone are expected to yield dividends on the capital. The initial issue of capital is 240,000 rupees, of which the vendor takes 85,000 in shares in part payment of the purchase money of 160,000 rupees.

=Mr. A. Van der Poorten, proprietor of several plantations in Galagedara district, devoted to tea, cacao, and cocoanuts, is mentioned in *The Times of Ceylon* as having spent a number of years in the Congo Free State, where he became familiar with African rubbers, and he has planted in Ceylon, by way of experiment, specimens of several species of *Landolphia*, and also *Clitandria Arnoldiana* (root rubber). Mr. Van der Poorten has considerable rubber growing on his estate in connection with other crops, including a few specimens of *Fun-tumia elastica* (an African rubber tree), reported to be just ready for tapping.

=Shipments of Ceylon rubber seed (*Hevea Brasiliensis*) were made lately from Rangoon (Burma) and Hong Kong.

## MONTE CRISTO RUBBER PLANTATION CO.

INCORPORATED January 28, 1905, under Colorado laws; capital, \$100,000; to purchase 5000 acres in Palenque district, state of Chiapas, Mexico, and form a rubber plantation, open stores, and operate means for transportation in Mexico. Directors: Bruce F. Johnson, F. H. Badger, Harry M. Haines, Thomas C. Williams, F. J. Decker, and H. E. Badger, all of Greeley, Colorado; Frank A. Chaney and Peter D. Rothwell, Denver, Colorado; Charles D. Cooper, Portland, Oregon; Arthur L. Tirto, Butte, Montana. The registered office is at Denver, but directors' meetings will be held at the Greeley office.

## REPORTED RUBBER PLANTING IN COLOMBIA.

AN interesting reference to rubber is made in a report by the United States consular agent at Quibdó, Colombia. This town is located on the river Atrato, and is the market for the rich gold mining region of El Chocó, in the department of Cauca. The Atrato is an important stream, emptying into the gulf of Urabá, an arm of the Caribbean sea. The reference to rubber follows:

"Important as is the gold mining of the Chocó, its supremacy is being disputed by the rubber industry. Cultivated trees are now producing about a ton a rubber a day. Most of the negro farmers are planting rubber in a small way, and the total is very large. Formal planting on a large scale is being carried

on at a number of plantations, as Yankolomba, La Maria, Salquí, Bebará, and Tanguí. The practice here is to cut the bark lightly with the *machete*, so as not to pass to the wood; the cut fills up with gum, which coagulates and is gathered the following day. Careful growers cut but a small portion at a time, so as to avoid weakening the tree, but can repeat the operation every two weeks or month, as desired. The strips, called 'chaza,' are gathered from the gashes and rolled together, and bring about 75 cents a pound in the New York market. Trees as young as 3 years are bled in some cases, but it is preferable to allow them to grow undisturbed for two years longer. Cultivated rubber here does not produce as much at a cutting as wild rubber, but the annual product is at least as great."

#### A VIEW OF CULTIVATED RUBBER IN MEXICO.

THERE has been distributed to the shareholders of The Obispo Rubber Plantation Co. a printed statement regarding the progress made on the estate of that company in the canton of Tuxtepec, state of Oaxaca, Mexico, during the last three years, under the management of the Republic Development Co. The principal feature of the book, however, is a series of 24 pictures reproduced from photographs taken on the property and designed to illustrate the progress of development from the first camp structures and the felling of the forests which then covered the property, to the setting out of the first rubber trees by the company and their growth to the present time. One comment which has been made regarding this book is that "Anybody can make photographs, but in order to photograph rubber trees the trees must first exist." There is reproduced on this page, on a small scale, one of the pictures referred to, regarding which the management state that it is a typical view of their planted rubber at the age of 2 years and 8 months, being a fair illustration of the even, clean, and sturdy growth of cultivated *Castilloa elastica* all over their property. These views indicate a healthful condition of the trees, and from their apparent size the soil must be very favorable. This plantation is the outgrowth of the work of Mr. Maxwell F. Riddle, whose connection with rubber culture and particularly with the companies above named has been referred to frequently in this Journal. The book of views here mentioned is copyrighted by Mitchell, Schiller & Barnes (New York), who have successfully financed the Obispo company.

#### WISCONSIN RUBBER CO.

[Plantation near El Salto, department of Palenque, State of Chiapas, Mexico. Office: Fairchild block, Madison, Wisconsin].

[See the INDIA RUBBER WORLD, September 1, 1903, page 426.]

At the first annual meeting of shareholders held at Madison on February 1, the reports showed that 1300 of the 5000 shares had been sold. John R. Markley, president, and Isaiah B. Miller, treasurer, of the Mexican Development and Construction Co.

(Chicago), who are developing the Wisconsin company's plantation under contract, were present, and received the thanks of the company for the way in which the work had been carried on. The officers of the Wisconsin were reelected: Professor Rasmus B. Anderson, president; Charles H. Hall, M. D., vice president; Samuel D. Merrick, secretary and general manager; Frederick C. Hutson, treasurer. The shareholders elected one of their number—Robert Hall, mayor of Brandon, Manitoba, Canada—to make the annual inspection of the plantation.

#### TO PLANT RUBBER IN HAWAII.

THE Nahiku Rubber Co., Limited, incorporated at Honolulu on January 25, with \$150,000 capital authorized, are the first company formed thus far to plant rubber upon territory of United States. The company have secured 800 acres of land at Nahiku, on the island of Maui, where the yearly rainfall is from 300 to 400 inches, and there is good drainage. There are now on the ground a number of Ceará rubber trees planted experimentally two, four, and six years ago, the yield from which, together with that of some varieties of *Ficus* in different parts of the territory, has encouraged the organizers of this company to undertake planting on an important scale. The company

purpose planting 60,000 Ceará rubber trees this year and 200,000 trees of different species next year, including *Hevea*, *Castilloa*, and *Ficus elastica*. The officers of the company are William W. Hall, president of the hardware firm C. O. Hall & Son, Limited, president; W. E. Shaw, vice president; Robert H. Anderson, director and manager; Dr. E. C. Waterhouse, director; Mr. Howland, auditor; H. L. Shaw, incorporator. Mr. Anderson is described as a practical rubber man with several years experience in Mexico, and both he and Mr. Hall, the president



VIEW OF RUBBER ON THE OBISPO PLANTATION.

of the company, have written to THE INDIA RUBBER WORLD enthusiastically in regard to the prospects of the new enterprise. The Honolulu *Commercial Advertiser*, of January 26, referring to the product of the experimentally planted trees, says that they "have developed a quality of rubber which was pronounced yesterday by a representative of one of the large mainland rubber companies to be of the very best."

#### KAMERUN (GERMAN WEST AFRICA).

THE latest report by the governor of this colony gives the following details regarding the exports of India-rubber, by districts, for three full calendar years and the first half of 1904:

YEAR.	Duala.	Victoria.	Kribi.	Total.
1901.....	72,105	50,342	383,712	506,159
1902.....	24,662	40,481	283,166	354,309
1903.....	35,516	26,924	564,071	626,511
1904 (6 mos.).....	15,730	20,732	350,219	392,681

The principal source of Kamerun rubber is in the southern districts, which, year after year, produce a larger percentage of the total output. The governor predicts that the exportation of rubber from the colony will increase for some time to come, and that the cost of obtaining it will also increase, as it becomes



necessary to go further inland for supplies. His report says: "On account of the growing exportation, those regions which are nearest the coast will become more and more exhausted, as the destructive method of gathering has been practised everywhere up to the present time. But this abuse will tend to be suppressed by the administration, through appropriate restrictive measures and instruction which the administration is going to give to those engaged in the industry. It is also intended to systematically replant those regions in the neighborhood of the coast, and partial measures necessary to this end have already been commenced."

#### "HEVEA" RUBBER IN MEXICO.

TO THE EDITOR OF THE INDIA RUBBER WORLD: We are pleased to inform you that we have on Hacienda Batavia a hundred *Hevea* rubber trees, planted in June, 1900. A measurement of a number of these trees shows a circumference, 3 feet from the ground, of 11 to 18 inches. Four year old *Castilloa elastica* show circumferences of  $17\frac{1}{4}$  to  $27\frac{1}{2}$  inches. These figures may be of interest for comparison with the measurements taken on your interesting trip to Ceylon. Wishing you the compliments of the season, I am, Yours truly,

EDWARD A. KUMMEL.

Resident Manager Batavia Co. (of Milwaukee, Wisconsin).

La Grange Diaz, Oaxaca, Mexico, January 1, 1905.

#### LECTURES ON INDIA-RUBBER IN IOWA.

THE University of Iowa, at Iowa City, has inaugurated a "university extension" course of lectures, to extend throughout the state, which has embraced this winter a series of talks on the "Plants that Serve," the idea being to supplement the study of botany at the university with suggestions of how systematic knowledge of plants and their products may be made of general utility. One of the lectures in the series, given by Professor Thomas H. Macbride, of the university, relates to the India-rubber tree, and the Cedar Rapids *Republican* mentions that this lecture was listened to by a large audience in that city on the evening of February 13. Iowa is far from being suited for the cultivation of any known rubber yielding species, but very many citizens of that state have become investors in companies formed to plant rubber in the tropics, and doubtless are prepared to listen with interest to any authentic information regarding the rubber tree, besides which they will probably be more interested than hitherto in the chief raw material entering into any rubber goods which they may wear or use otherwise. Professor Macbride's lectures are liberally illustrated by means of a series of lantern slides.

#### RUBBER FROM UGANDA.

THE general report on the Uganda Protectorate, of East Africa, for the year ending March 31, 1904, made to the British colonial office, while indicating a very considerable general increase in imports and exports, fails to show an improvement in the output of India-rubber, though there is a possibility that in connection with the land survey now in progress, and the incidental systemization of the licensing of rubber gathering, a larger production will result. The report says on this point: "Rubber has fallen from £3431 to £2795, entirely owing to the mortality from sleeping sickness on the Sesse group and other islands on the north of Lake Victoria, where the rubber industry first started and developed, and where the richest forests are situated. During the year permits to collect rubber in several of the inland forests were issued, but these have not yet had time to be thoroughly worked." —The administration is active in its efforts to have the native chiefs interest their subjects in the exploitation of rubber, and also in experimenting with the cultivation of various species, in addition to the native

*Landolphia*. The Pará rubber tree has shown an encouraging rate of growth and three acres have been planted to this species in the government botanic gardens.

#### GERMAN NEW GUINEA.

THE Neuguinea-Kompagnie, engaged in extensive plantation enterprises, had rubber trees under cultivation at the end of 1903 as follows:

Herbertshöhe.....	2,559	
Friedrich Wilhelmshofen.....	81,000	
Stephansort.....	130,485	214,044

#### FEDERATED MALAY STATES.

BATU CAVES Rubber Co., Limited, registered in London December 21, 1904; capital £30,000; to acquire the Batu Caves estate, in Selangor, and to grow India-rubber and other produce in Selangor or elsewhere. No initial public issue. Directors: T. N. Christie, J. McEwan, H. K. Rutherford, and R. Williamson. Registered office: 10 and 11, Limes street, E. C., London.

=Cicely Rubber Estates Co., Limited, registered in London December 20, 1904; capital £12,000; to acquire and develop the Cicely estate near Telok Anson, in Perak, held from the government by H. A. W. Aylesbury. Directors: Dr. S. Rideal, C. De Winton, C. F. Deane-Drake, and H. W. Brett.

=Patent rights in Pahang have been granted to Mr. Fritz Freudweiler, a planter of Bila, in Sumatra, for his invention of a new punch for tapping rubber trees. It is claimed that by the use of this punch the trees can be so tapped for the extraction of the *latex* as to cause no damage.—*Straits Times*, December 24.

=The well known Mount Austin Pará rubber estate, in Johore, the property of the Tebrau Planting Co., Limited, has been sold by private contract to a local merchant firm, through Messrs. H. E. Coghlan & Co., estate agents.—*Straits Times*, December 22.

#### BRAZIL.

MR. JOSÉ PEREIRA CAVALCANTE has paid to the tax collector [at Manáos] the sum of 5000 milreis, being the transfer tax of 5 per cent. on the amount of 100,000 milreis [= about \$28,000 at the then current rate of exchange] for which Messrs. B. A. Antunes & Co. [of Pará] have purchased the Sant' Anna and Santa Luzia *seringaes* [rubber estates], both situated on the river Juruá.—*Folha do Norte*, January 17.

=According to statistics which have been compiled, the municipality of Maranguape (Ceará), has, during the year just ended, produced 220,000 kilos of crude *Maniçoba* rubber, thereby exceeding the production of former years.—*Folha do Norte*, January 13.

#### COLOMBIA.

ADORNADA Rubber Co., Limited, registered in London, January 13, 1905; capital, £8000; to acquire the interest of A. Jouve, of Bogota, republic of Colombia, over certain lands containing rubber trees, and to carry on the business of growers and exporters of rubber. No initial public issue. Directors: H. Aigoin, P. Dujardin, and T. Bonhote.

#### ZANZIBAR.

THE rubber trade consists of importations from the east coast of Africa, and exports to Europe. Custom house figures for six years show:

1897 .....	642,104 pounds imported :	312,489 exported.
1898 .....	251,530 " "	234,522 "
1899 .....	322,521 " "	313,773 "
1900 .....	190,520 " "	190,311 "
1901 .....	223,474 " "	219,703 "
1902 .....	257,491 " "	305,105 "
Total...	1,917,949 " "	1,575,900 "

## THE INDIA-RUBBER TRADE IN GREAT BRITAIN.

*By Our Regular Correspondent.*

**T**HAS been suggested to me that an estimate of the extent to which the sale of foreign made tires has increased in England since the lapse of the Dunlop monopoly would prove of interest. In making any such estimate one has to rely largely on hearsay and opinions, because there are not, to the best of my knowledge, any available statistics from which inspiration can be drawn. I imagine, however, that it is not far from the truth to say that the change in the general situation has not been one of any magnitude. Doubtless the names which the Michelin and "Continental" tires have made for themselves in the past act potentially in securing for their respective proprietors an important share of British business. But if their field has been measurably widened by the expiry of the patents is another matter. As a member of the home trade put it to me: "Formerly the French and German tires could be imported only by their paying a royalty to the holders of the leading patents. But the first result of the expiry of those patents has been to open the field for home production to all who care to enter, so that prices have declined to a greater extent than the amount of the royalties formerly paid by the imported article. To retain an important amount of trade, therefore, our foreign rivals must meet the new competition in prices. Meanwhile, British manufacturers are in a position to claim to make as good motor tires as anybody else, and even better, and the British buyer will prefer the home makes as soon as he appreciates this fact. It would seem, therefore, that the only means by which continental firms can largely increase their sales is by means of a reduction in prices below those ruling at home, and in doing this the risk is incurred of lowering the quality. And this is fatal in the motor tire trade, no matter what may be true in some other branches."

The arrangement made between Messrs. David Moseley & Sons, Limited, and the Seddon Tyre Co. as regards manufacture still obtains, though the rubber firm have also a tire of their own with beaded edge, practically the Clincher tire. The Martin tire seems to have come to an untimely end, and there are one or two others of which nothing has been heard for some time. In one or two makes the thickness of the tread, which was advertised as an advantage, has had to be reduced, as trouble was caused by its giving way. In this respect I hear favorable reports of the motor tire made by the Radax company, of Blackley, Manchester. In this tire a thick tread is put on in a special manner which enables it to wear well and renders the tire practically non-skidding. I understand that the Swain Tyre and Rubber Co., of Bolton, successors to the Swain Tyre Syndicate, have discontinued the manufacture of the cycle tires which bore their name. The attention of the new company is now concentrated on motor tires made under the original Swain patents. They are said to be particularly advantageous for American single tube rims. The single tube tire can be taken off and the detachable double tube Swain tire substituted without any alteration to the wheel being necessitated. In fixing the tire, ordinary "butterfly" security bolts are put through the lug holes present in the rim. The Wedge Tyre Co., of Ancoats, Manchester, are engaged in perfecting a motor tire under their special process. The original patentee of the Wedge tire, Mr. Shepherd, I may say, died a week ago at an advanced age.

**ELECTRICAL NOTES**

THE ordinary electrical engineer is not as a rule remarkable for his knowledge of rubber, so I am not altogether surprised to find a lecturer at the Birmingham Electrical Club condemning rubber insulation, though it would be interesting to know on what grounds he bases his contention that the better the rubber the more quickly it deteriorated. I was rather under the impression that it was the use of low-priced compounds which had brought rubber into disrepute as an insulator. No doubt in many cases of failure the rubber compound has been to blame, but also in many cases it has been unjustly indicted. When a breakdown occurs care is not always taken to exactly assign the cause; it is an easy way out of possible trouble to put it down to a defect in those rubber cables. The station engineer, however, may possibly be to blame, either for putting too high an electric pressure on the cable; or for laying the protective iron piping in a situation which permits of its corrosion. I have recently examined some iron pipes in an extremely corroded condition, and it is not at all surprising that a breakdown occurred. Whether from motives of economy or from indifference it is certain that the causes of a good many breakdowns are never thoroughly investigated and thus an opportunity of obtaining important information is missed. With regard to the cable making companies, it may be safely inferred, I think, that Callender's Cable and Construction Co., Limited, will be interested in an important way in a company which has been formed in Milan under the Italian laws, called Candiana et Cie. Bitume Callender, a large share in the capital of which will be held by George M. Callender & Co., Limited, the bitumen manufacturers. The exact relation of the cable company with the other interests named I am not prepared to state, but the fact that bitumen enters to a large extent in their insulation work is well known.

**PLANTATION RUBBER.**

I HAD an interesting chat recently with a gentleman who has a considerable stake in the rubber planting developments in the Malay states. His experience of rubber trees has been gained in various rubber producing countries, but as he has special knowledge of the West Indies I turned our conversation in that direction. With regard to the rubber plantations in Trinidad and other islands, the outcome of the experiments that have for so long been carried on and in the various botanical gardens he spoke rather disparagingly. The Pará tree does not seem to make much headway, and in his opinion it would be better to stick to the *Castilloa*. Some projected plantations in Trinidad have fallen through, or are in abeyance, for want of capital. My informant had nothing good to say of Ceará rubber, having been concerned in its attempted exploitation in Ceylon. One would have thought that the *Castilloa* would have been a better venture. The opinion has been expressed by a planter of experience in Ceylon that insufficient care is being taken in many instances to select suitable ground for the Pará tree and it is prophesied that some of the recently started plantations will come to no good. I give this opinion for what it is worth, but it seems of sufficient importance to mention. With regards to the Straits the main difficulty would seem to lie in the labor question, a serious deficiency being reported. It is interesting to note that the success which has attended the cultivation of the Lagos rubber tree (*Funtumia*) has led to



its attempted cultivation on a large scale. The tree is one of very rapid growth, and from all accounts it promises to do exceedingly well. It will be remembered that this rubber was exploited largely during Sir Alfred Molony's tenure of office in Lagos, but in succeeding years the exportation of the rubber very largely declined on account of the destruction of the trees. The embargo which was put on the collection for a period naturally led to stagnation in the exports, but 1904, when rubber collecting was again allowed, showed a satisfactory export.

It was with much regret that I heard of the death of Dr. Weber, in America. It must be more than twelve years since I first came into contact with him, on his joining the firm of Frankenburg in Salford, Manchester. Few who have had dealings with him can have failed to admire the enthusiasm and energy which characterized his original work on India-rubber, more especially in connection with analyses. Perhaps the German minuteness of detail proved somewhat wearing to readers of the technical press, in which his results almost exclusively appeared, and the field being largely an untrodden one, comparatively little discussion ensued at the time as to the reliability of his methods or the soundness of his theories. Henriques and Weber, however, have done great service in clearing away obstacles which hitherto impeded the progress of the rubber analyst, and it is noteworthy how at the present time quite a number of chemists, in Germany especially, have entered the lists as investigators in the field of rubber cultivation and technology. While my personal relations with the deceased were not of a close nature, I would emphasize the fact that he was always scrupulously particular in mentioning by name any authors whose figures he had occasion to use.

UP to quite recently Sicily has had practically a monopoly in the sulphur trade, America being her largest customer. It is an interesting fact, and one not without importance to the rubber trade, that the United States have now commenced to produce sulphur, from the Louisiana deposits. These have long

been known, but on account of their depth and the unstable nature of the ground it has not been found possible to mine. By what is known as the Frasch method, in which the sulphur is melted by superheated water, and pumped to the surface, the difficulty has been overcome. The arrival of a cargo of this sulphur at Marseilles has aroused concern in Italy, and formed the subject of interrogations in Parliament. It certainly seems as if the big dividends earned by the Anglo-Sicilian Sulphur Co. will be seriously affected in the future.

FROM the general standpoint the lamentable situation in Russia does not call for notice in these columns, but from the particular point of view of the industries affected a word or two will not be out of place. References in the daily press to the "Russian-American Co." as among the factories affected by the strike are concerned with the big rubber company which I understand is the largest rubber concern in the world. A friend of mine who is closely interested in Russian business, informs me that there is no other Russian-American company in St. Petersburg; therefore there is no need to describe the firm in greater detail. My informant went on to say that he thought the rubber company would not be very eager to take back the men who struck work, as they thought their action ungrateful and unjustified in view of the fact that they were the best paid work people in St. Petersburg. With regard to the Russian-French Rubber Co., of Prowodnik, a few miles out of Riga, I am informed from inside that the men suddenly struck work on January 25, the action

being brought about by one or two agitators marching through the departments and calling upon the hands to cease work; the main reason alleged was, I understand, the desire for an 8 hour day. In common, of course, with the other industries, the rubber trade in Russia has thus experienced vicissitudes of great moment to the management; this demand for an 8 hour day seems to me to be of too radical a nature, having regard to what obtains in the world's industrial centers generally, nor can the inclusion of such a demand as part and parcel of a requisition for a constitution be considered as at all a politic proceeding. Of British rubber firms F. Reddaway & Co., Limited, of Manchester, who have large belting mills in Moscow, will be likely to feel the present disturbances in the greatest degree.

THE new price lists issued by the Dermatine Co., Limited, of Camberwell, London, call for a word or two of notice, more especially on account of the excellence and utility of the illustrations. In the valve list some special matter has been written by an engineering expert, detailing the best forms of guards and grids for condenser plants. My knowledge of engineering does not enable to say anything by way of criticism, but I feel that a price list which goes into such important detail on momentous and abstruse topics cannot fail to attract at the hands of engineers that meed of attention at which it aims. The rubber manufacturer may possibly be inclined to break a lance with the versatile compiler of the list with regard to some of his references, but no doubt there is much truth in what is said as to the decline in favor of rubber valves being attributable largely to the use of inferior rubber or to the supply of qualities unsuited for the particular purposes for which they were required. In a case of this sort expert knowledge must prove invaluable and there can be little doubt that where in this respect the Dermatine Co. have led the way others will show a disposition to follow.

### SOME WANTS OF THE RUBBER TRADE.

[309] A SUBSCRIBER TO THE INDIA RUBBER WORLD in Italy writes: "We would be much obliged if you could please indicate to us some firms or mine owners or manufacturers of Asbestine of your country."

[310] A jobbing house in Memphis, Tennessee, writes requesting to know who manufactures "a little rubber novelty on the market known as a 'Squeezit,' which article fits in the end of a sack of smoking tobacco and keeps the tobacco from wasting." The same inquiry comes from a subscriber in Cleveland, Ohio.

[311] A correspondent in Brooklyn, New York, writes: "I saw in your January issue an article on Gutta-Gentsch. You will kindly inform me where I can obtain samples of this product."

[312] A correspondent at Hempstead, New York, writes: "Can you give me the name of the English firm making Versuvian white and Vulcanine?"

[313] A correspondent in Brussels, Belgium, writes to ask where he can obtain the product *l'extrait russe Jackten* for use in the deodorization of Caoutchouc. One New York house reports in regard to the above: "No doubt Jucten extract, or oil of Rusci is meant." Another house reports: "The article wished is known as oil of birch tar, crude, which we believe is sometimes known as oil Rusci and is a Russian product."

### ANSWERS.

[308] The N Tire Co. (No. 415 Dearborn street, Chicago) write: "In reply the inquiry for rubber dice boxes, we are pleased to state that we make these articles."

PRODUCTION  
OF SULPHUR  
IN AMERICA.

DISTURBANCES  
IN RUSSIA.

## THE TROUBLE WITH AFRICAN RUBBERS.

BY T. W. C.

TO THE EDITOR OF THE INDIA RUBBER WORLD: It occurs to the writer that no satisfactory solution of the trouble with African rubbers is likely to result from the discussion now carried on in the columns of this Journal unless we cease guessing and begin at the beginning. The "beginning" takes us back to the African jungle, to the banks of the Congo, to the depths of the primeval forest. No one interested in the rubber manufacturing industry has to be told of the crude methods still followed in the securing of sap, and the almost total destruction of trees and vines yielding it, over large and steadily increasing areas in Africa. The change for the better that is reported from the South American field seems to have made little progress there. Then, too, the African country seems to contain a greater variety of plants from which *latex* is secured, and the product comes to market under a bewildering list of names, and each particular brand is individualized by the method of its gathering, location, its color, shape, and condition. Let us consider briefly a few of these:

Senegal and Bissao balls, from Senegambia, Soudan, and Bissagos islands, come in balls or sheets, outside surface black or brown; cut surface, rose color or white; filled with sand, bark and dirt. Loss in working 25 to 50 per cent.

Gambia balls, from the same source, black or brownish white; cut surface white or light rose color; filled with sand and bark. Loss 20 to 50 per cent.

Casamance, (Boalam) from Casamance river table land, comes in balls or sheets. Outer surface dark brown, cut surface, grey, cream yellow and reddish; filled with holes, sand and earth. Loss 40 per cent.; odor bad.

Niggers from Sierra Leone and Massai come in red, brown, or white balls; cut surface showing much the same color. Sometimes filled with earth and bark; sometimes quite clean. Loss 10 to 35 per cent.

Liberia comes in white, brown and black balls and lumps; cut surface of balls rose color and white; of lumps, green, yellow, and white. Quite clean as a rule. Odor of lumps very bad. General loss 20 to 40 per cent.

Accra, from the Gold Coast, comes brown or black, and cut surface shows yellow and brown; sometimes quite dirty. Loss 30 to 45 per cent.

Gaboon balls, from the French Congo, come in large and small balls, black or grey. Cut surface of large balls shows rose, blue, red; of the small, grey, white, or green. Contains bark and sand; odor bad. Loss 30 to 40 per cent.

Kasai rouge, from the Congo Free State, comes in small balls, color red, quite free from impurities. Loss 6 to 8 per cent.

Kasai noir, comes in pieces of irregular size formed of balls stuck together. Contains little sand or wood, but on the other hand is noticeable on account of quantities of volatile, fermenting substances.

Upper Congo (common) comes in balls, containing some bark and water. Loss 15 per cent. Upper Congo (white) comes in balls, and is very pure.

Equateur, from the Congo, comes in balls stuck together, quite free from dirt.

Lopori, from the Congo, comes in balls, and contains volatile and fermenting substances.

Aruwimi, Mongala, and Bumba come from Congo in large balls, contain large quantities of fermenting substances, show great loss in working, and are distinguished by a very bad odor.

This is certainly enough to make the average superintendent old before his time, unless he has the assistance of a chemist,

and he, doubtless, could write books regarding that "tired feeling," induced by each purchase of "Africans." With Pará he may, ordinarily, feel firm ground under his feet. The "personal intelligence system" has made some headway there, with encouraging results. Knowing that the *latex* contains substances liable to fermentation, the best known preventive is used, viz.: repeated action of moderate heat, to remove water and smoke producing carbon, which acts as an antiseptic, and possibly assists in the absorption of oxidized resin in the sap.

In Africa, on the other hand, the quantities of dirt, sand, and bark, in the gum marketed, tell the story of shiftlessness in gathering, and the putrid odor, and general condition of lack of intelligence or indifference in coagulating. In the Congo country the gatherer may smear the *latex* over his entire body, or upon his arm, as it exudes from vine or tree, or it may be allowed to drip upon the ground from which it is gathered with its accumulation of dirt and bark. Such a person will not be overscrupulous regarding what he gathers. The fact that the *latex* in the heart of the *Landolphia* is acrid, watery, and spoils quickly is a matter of indifference. It goes into his gourd or pail along with the rest.

In the matter of coagulation there seems to be a corresponding lack of intelligent direction. Brant says that on the Congo "fresh sap is mixed with four or five times its quantity of water, upon which the rubber rises like cream, in a mass containing substances sure to result in fermentation, and deterioration." This shows the origin of one trouble to which Mr. Thornton has referred.

In Pernambuco, however, a solution of potash combined with alum is used to coagulate. Gum treated in this way loses its elasticity, becomes brittle, and the chemist will discover that the crystals on the surface are alum. In Madagascar and Gambia citric acid and sulphuric acid are used; in the Ivory Coast and Kamerun districts, sea or common salt. The use of salt to coagulate will frequently account for the large percentages of water in African rubbers. It appears, therefore, that the most satisfactory results are obtained by the use of smoke, artificial or natural heat, or salt, in coagulation, and that the use of alum, mineral or vegetable acids, and the addition of water will result in injury to the quality, if it does not altogether destroy the rubber.

This condition apparently emphasizes the necessity for chemical examination of all rubber before it is used in the factory. The "by-guess and by-gad" method relied upon with such confidence by some superintendents can hardly fail of disastrous results. If the chemist can tell whether acid was used in coagulation, so he can ascertain the percentages of resins, oxygen, etc. Mr. C. O. Weber, the eminent expert, directs special attention to the presence of resins: "Resinous impurities determine to a considerable degree the behavior, especially of the inferior brands, of India-rubber in practical working, and they are also supposed to have a marked influence upon the stability of the finished product."

Consequently it follows that the superintendent who from indifference, or lack of facilities, fails to ascertain the quantity of sulphur that will be absorbed by resinous substances in the gum used, and in consequence, diverted from the proper vulcanization of a given compound, must not be surprised if goods fail to cure properly.

That the presence of resinous matter in rubber is something to be reckoned with, and dealt with intelligently, is shown in this table, compiled from the experience of several authorities:

Pará, .....	2	Kasai .....	4
Congo, .....	8.5	Lagos, .....	4.5
Gambia, .....	7.5	Lopori, .....	3



In view of these particulars, therefore, it is apparent that the various rubbers should receive individual treatment. For example, the softer sorts of Africans should not be subjected to the same degree of heat as Pará. This is mentioned for the reason that many factories have but one dry room for washed rubber, which is frequently filled with different kinds and grades. An African rubber should be dried slowly. It will also be found that the strength and elasticity of such grades as Lopori and Congo will be conserved by keeping them out of hot water, using cold water only in cleansing and sheeting.

As to the future for the African product—should one consider the subject from the viewpoint of Mr. Georg Waldau, who wrote so interestingly in your January issue, on the "Extinction of African Rubbers"—there would appear little prospect for improving either method or quality. But Africa is a huge continent, its resources undeveloped, and the same cupidity that now seems bent on destroying the source of rubber supply for the sake of quick returns, will, later on, protect it that it may continue to be a source of revenue.

Cambridge, Massachusetts, January 7, 1905.

## CARBON TETRACHLORIDE AS A SOLVENT.

BY WILLIAM F. DOERELINGER.

**C**ARBON tetrachloride is a heavy, colorless, transparent, mobile liquid, having a neutral reaction. Its taste is pungent, aromatic, and cooling. Its odor is agreeable and aromatic, resembling that of chloroform.

It is non inflammable and non explosive. Its vapor does not take fire, but it has the remarkable property of tinting a blue flame green and the green flame as intense blue. The vapors do not support combustion, but act in the reverse as a fire extinguisher. A few drops placed upon a burning alcohol lamp or on a wick of a burning candle extinguishes the flame at once.

The specific gravity of Carbon tetrachloride is 1.6; the boiling point 77° F. The liquid is insoluble in water, diluted alcohol containing less than 75 per cent. by volume of absolute alcohol and also in glycerine and the glycerides. It is freely soluble in acetone, glacial acetic acid, oleic acid, liquid carbonic acid and aqueous solution of carbolic acid, ethyl, and amyl alcohol, chloroform and spirits of chloroform, carbon disulphide, benzol (benzene), ether and spirits of ether, aniline, oil of turpentine, petroleum and all petroleum products; also in fixed and volatile oils and oleoresins.

Carbon tetrachloride is itself one of the greatest of solvents. It dissolves oils, fats, resins, wax, India-rubber, Gutta-percha, ceresin, spermaceti, paraffin, stearin, varnish, paints, asphaltum, pitch, balsams, coal tar, pine tar, and soda and potash soaps. It also dissolves salicylic acid, carbolic acid, iodine, bromine, iodoform, bromoform, menthol, thymol, camphor, camphor monobromate, naphthalin, etc. It furthermore dissolves several gases, among others ammonia and hydrogen sulphides. It is not acted upon by the strong mineral acids and is not decomposed by an aqueous solution of potassa, which will, however, remove any carbon disulphide or hydrogen sulphide present. An alcoholic solution of potassa converts it into a mixture of potassium chloride and potassium carbonate.

Carbon tetrachloride is by nascent hydrogen gradually converted into chloroform, and by still further reduction into dichlormethane or methylene bichloride.

It is strongly recommended as an extracting medium. It is important to remember that in contrast with benzine, gasoline, etc. Carbon tetrachloride ( $\text{C Cl}_4$ ) is a chemical unit or indi-

vidual, and in its recovery from the extracted fats, grease, etc., it is always obtained as the same chemical combination, with the self same properties; whereas in benzine or gasoline there are unavoidable losses to be sustained, particularly the valuable, very volatile parts, so that with a continued use of benzine the remaining less valuable ingredients, the heavier oils, must finally be enriched by important additions of fresh benzine or gasoline.

It may be objected, that, in spite of the undeniable advantage of Carbon tetrachloride, its present high price forms an insuperable obstacle to its extended use. A superficial comparison of the commercial values of different solvents would, at first, seem to favor the lower price solvents in preference to Carbon tetrachloride, and yet such acceptance is not warranted.

Although the prime cost at current prices of the amount of Carbon tetrachloride necessary to establish an extracting plant upon a running basis is indeed much higher than that of benzine, gasoline, or Carbon disulphide, the losses incurred in the use of the Carbon tetrachloride and the expense for steaming, condensing water, labor, etc., employed in the recovery are so much less than with either the other mentioned solvents that even in the face of the high price of Carbon tetrachloride the work may be performed at a greatly reduced cost, and without fire risk.

Again, it must not be overlooked that the oils and fats extracted are obtained in the highest degree of purity, absorbing none of the extracting medium whatever, not even the odor, which is most difficult to avoid in the employment of some grades of benzine, gasoline, and particularly with carbon disulphide.

It is particularly important in the manufacture of oils, from oil seeds, since the residue from the oil seeds, the so called oil cake, is not particularly relished by the animals to which it is supplied as food, when it contains the contaminations incident to the use of carbon disulphide. As a consequence the cakes are more difficult to dispose of than those extracted by Carbon tetrachloride.

An apparatus already installed for the recovery of the solvents, does not need to be remodeled for the recovery of Carbon tetrachloride, and since the distillation process may be likewise carried through in the customary manner, there are no expenses attending a trial of this new solvent.

Another remarkable property of Carbon tetrachloride is that it does not in the least affect the colors of fabrics. The most delicate colors, even aniline colors of silk, satin, laces, etc., are not affected in the slightest degree. A mixture consisting of equal parts of turpentine and Carbon tetrachloride cannot be ignited at ordinary temperatures. A mixture of 60 per cent. Carbon tetrachloride and 40 per cent. naphtha is likewise non inflammable at ordinary temperatures.

Carbon tetrachloride is shipped in steel drums holding 650 and 1400 pounds, although smaller packages usually can be obtained from the manufacturers for experimental purposes.

In a report on the French automobile trade, the American consul general at Paris, Mr. John K. Gowdy, writes: "Some interest is now being given to the construction of light and heavy motor vans for the delivery of goods, and it is anticipated that a great deal of business is to be done in this branch of the industry, there being more firms, no doubt, in need of conveyances for the delivery of goods to customers than private individuals needing cars for touring. The city of Paris now has street sweepers, fire engines, post-office vans, and dust carts propelled by motor."

## ELECTRICAL EXHIBITION AT BERLIN.

At the exhibition of apparatus and materials held in connection with the recent "silver" jubilee (twenty-fifth anniversary) of the Elektrotechnischer Verein, in Berlin, the *Gummi-Zeitung* noticed the failure to be represented of the leading German rubber manufacturers who are engaged in producing insulating materials. The one notable exception was the long established firm, Dr. Heinr. Traun & Söhne, formerly Harburger Gummi-Kamm Co., whose exhibit comprised some important novelties, which attracted no little attention and interest. There was, for example, corrugated and ribbed soft rubber tubing, the subject of the German patent (D. R. P.) 150,498.

The manufacture of such tubing the interior or exterior surface of which is supplied with elastic ribs, makes it possible easily to insulate flexible or rigid metallic tubing with a material that will adhere well. The use of such ribbed tubing offers the following advantages for the stringing of wires in metal tubes or other conduits: (1) The friction occasioned by stringing the wires is lessened; (2) the effects of atmospheric pressure, often a hindrance in the stringing of wires, are obviated; (3) uneven exterior or interior surfaces of metal tubes which are to be covered or lined, are no longer objectionable, because they are evened up by the elastic ribbed rubber tubing.

For electrical and chemical manufacturers, and for all those requiring tubing with absolute interior insulation, Dr. Traun's firm exhibited a self closing, conical device, making a tight terminal connection, supplied with threaded flanges, serving the purpose of insulating the circuit and protecting it from interior pressure.

Flexible metal tubing inwardly and outwardly lined and covered with corrugated or ribbed rubber tubing, makes a suction tube which will not get out of order while in use, and cannot collapse as a result of atmospheric pressure. Corrugated or ribbed rubber tubing, in connection with rigid or flexible metal piping, is especially adapted for high tension circuits on ships, in mines, chemical works, revolving flash-lights, etc. Flexible metal tubing, interiorly insulated—so called "Hydra tubing"—can be used to great advantage for pneumatic tools, and, in fact, in all cases where fluids or gases are to be conveyed under pressure without their coming in contact with metallic surfaces, and where absolute tightness is necessary.

As a substitute for pure hard rubber, which, in accordance with the "Jena" precepts, cannot always be used for currents of high potential, the firm exhibited an insulating material bearing the name "Isolast." This peculiar substance can be worked as readily as pure hard rubber, while, on being heated to 100° Centigrade and then set on fire, it will not carry the flame, as it becomes self extinguishing. This material will stand heat very well, and may be obtained in a condition of hardness similar to leather.

An improved and very perfectly insulating kind of hard rubber was likewise exhibited, adapted especially for the insulation of alternating high tension currents for large induction apparatus, such as those used in the production of X rays.

In its review of electrotechnical progress in Germany, our Dresden contemporary, after mentioning the first experiments in telegraphy made by Dr. Werner von Siemens, says that Gutta-percha was first used for manufacturing purposes in Germany in the year 1845, by the firm of Rost & Co., at Harburg a/d Elbe, whose works are still in existence. A few years afterwards the manufacture of vulcanized India-rubber was added to the Gutta-percha industry. We owe the introduction of this

branch of manufacture into Germany—where it has since grown to enormous proportions—to Dr. Heinr. Adolf Meyer, who died in Kiel in 1889. In the year 1851 he purchased, in company with his partner, Mr. Conrad Poppenhusen, the Goodyear patent for the manufacture of hard rubber, and established a manufacturing plant in New York. In Germany they used the plant of H. E. Meyer, the father of Dr. Adolf Meyer, this plant being at the present time owned by the firm of Dr. Heinr. Traun & Söhne. The first plant in Germany for the manufacture of vulcanized soft rubber goods was established at Harburg in 1856 by Cohn and Menier, now known as the Vereinigte Gummiwaaren-Fabriken, Harburg-Wein.

In spite of the enormous importance of Gutta-percha and vulcanized India-rubber in the electrical industries, it is a curious fact that during the twenty-five years of its existence, the Elektrotechnischer Verein has published only *one* lecture on the subject of insulating materials. That lecture was delivered in 1898 by Dr. Böhlendorff, and dealt with Ambroin, used for currents of high potential.

"Throughout the exposition," says the *Gummi-Zeitung*, "we found that hard rubber was used as an insulating material by all exhibitors of electrical apparatus. We have therefore come to the conclusion that in the construction of electric devices, hard rubber occupies the highest rank as an insulating material, because electrical engineers appreciate that it possesses more desirable qualities than any other substance. - - - The ideal insulating material, in the eyes of the modern electrical engineer, would be a non-combustible substance, molded and bent as easily as India-rubber or Gutta percha, and which, besides, would not be hygroscopic (not influenced by conditions of moisture), and would act, in regard to contraction and expansion—within the limits of normal temperatures—like a strong, resistant, low priced metal of low specific gravity. Such an ideal insulating material, however, has not thus far been discovered."

## A LANGUAGE STUDY ON RUBBER.

[FRANCIS E. LEUPP, IN "THE EVENING POST", NEW YORK.]

PERSONS who are interested in the development of word meanings will find few in our language which have had a more curious history than India-rubber. It gets its last name from the use to which it was first put—that of erasing pencil marks by rubbing. "India" it gets just as our Cherokees did their name Indian. The tree was first described by an explorer in Mexico three centuries ago, while the first account of the substance occurs in connection with Columbus's visit to Haiti on his second voyage. As Columbus and the explorers who followed him were searching for a short passage to India they naturally opened the way for the perpetuation of this mistake.

The fact that the use of this gum to rub dictated its original name, has led to some extraordinary uses of the term rubber, especially in the breezy vernacular of the day. A person who projects his head forward to listen is said to "rubber." Speaker Cannon talked disparagingly of "rubber currency." This was his interpretation of the word "elastic." Among his congressional associates the same commodity has been many times used to typify certain of their characteristics as statesmen. "Gumshoe Bill" is the affectionate title by which the junior senator from Missouri, the Hon. William J. Stone, is called by his loyal constituents. "The celebrated rubber-tired statesman" is the familiar term in the Western newspapers to signify one who gets over the ground without much bumping and jolting. These are quite remote descendants of the infinitive "to rub."



## THE LATE DR. C. O. WEBER.

THE career of the late Dr. Carl Otto Weber was the subject of a paper read before the American Chemical Society, at a recent meeting in Boston, by Mr. Arthur D. Little, a member. From this paper some extracts are given below, bearing upon the interesting personality of the distinguished chemist; the purely biographical details are omitted, to avoid duplication of facts given in our sketch of Dr. Weber printed last month. Mr. Little said:

" - - - I first met Weber about five years ago in Manchester. He was then chemist and manager of the Greengate Rubber Works, one of the largest in England. The manufacture of rubber goods abroad is not specialized to anything like the extent which obtains here, and it would probably be impossible to find in the United States, though I speak without information, any works devoted to the manufacture of so great a variety of rubber products as this great English plant. Weber thus became practically familiar with the making of rubber shoes, mechanical goods, mackintosh cloths, hose, cables, and many other things to an extent which could hardly fall to a rubber chemist here. His work was of course mainly concerned with the daily intricacies of this complex manufacture, and it left him little time for research. To what good use that little time was put his patents, his book, 'The Chemistry of India-rubber,' and his many published papers show. I remember that at the time of our first meeting he was especially pleased with the results he had obtained in printing with aluminum inks colored silk patterns on the rubber side of unfaced mackintosh cloths. The fabrics could hardly be distinguished from the silk lined cloths a foot away.

"I remember also that he was then following the degradation changes which occur in the working of rubber by a series of molecular weight determinations by the boiling point method on the rubber in its different stages of manipulation. This struck me at the time as a beautiful adaptation of the methods of pure science to technical work. The whole subject of the colloids had an absorbing interest for him. He regarded them as being, as undoubtedly they are, the connecting link between living and dead matter, and the great volume in which Graham's researches were published were always on his desk. I still hold vividly in mind one night at Blackpool when Cross, the cellulose chemist, Weber, and myself sat up till 3 o'clock stretching chemical theory until it broke, and all the talk was of the colloids. On Weber's part it was a memorable display of the scientific imagination directed and controlled by the cold logic of fact. I saw another side of the man during a week's end at Windermere in the beautiful English lake region. He was keenly responsive to every changing phase of nature and alive to all the associations which English literature has thrown around that region.

"The work which first brought us together had to do not with rubber but with cellulose, and though this was my own specialty and a somewhat alien subject to him, Weber quickly made me feel that I must be very sure of my ground before each step. Cellulose was a colloid, and he claimed all colloids for his province. He introduced me to Bütschli's work and pointed out again and again how the peculiarities of plant structure might be traced to the colloidal character of cellulose. He devised the first process for the preparation of cellulose acetate in commercial quantities and was the first to prepare any of the higher fatty acid esters of cellulose.

"I shall have sadly failed if I have not yet made clear to you that Dr. Weber was a remarkable man. I would like to give you his personal history in some detail but that unfortunately

I cannot do. - - - His ancestry was largely German, largely Scotch, and for generations one of the sons had entered the ministry as a matter of course and family tradition. I had always found it difficult to orient him with the Germans. He used to say himself that in his man's estate he could not hope to remain out of jail three months in Germany, and I remember very well the delight with which I learned that the Scotch were so largely responsible for his being. It explained so many things. He was more Scotch than German in appearance. He had the Scotch love of controversy and the German imagination, German science, German music. As a Scotchman he studied theology, as a German he studied philosophy and poetry and music; then he studied chemistry. How many of us here to-night can say that our own chemistry might not have builded better on such a foundation.

" - - - In Colombia he studied the gathering and curing of rubber upon the spot. He was able to prove there that no rubber exists in the fresh *latex*, that it is an oxidation product, and that the coagulation of the *latex* is due to albumenoids and not to rubber. He prepared there and brought back with him samples of rubber as clear as celluloid.

" - - - Shortly after his return to England from Colombia the Hood Rubber Co., in what has always seemed to me a spirit of unusual liberality and appreciation, made definite overtures to secure his services for a term of years, upon terms which not only promised a competence by the end of the period, but best of all offered every facility and incentive for the research work he had had so long in mind. He took this tide in his affairs at flood and came to Boston. The establishment of the India-Rubber Research Laboratory at No. 19 Columbia street immediately followed, with Dr. Weber at its head. It was one of the very best working laboratories I have ever seen and it is where he left it. The laboratory is there but the directing mind is missing.

" - - - Chemistry suffers in the popular estimation because it is assumed to touch life at fewer points than the professions of theology, the law, or medicine. As chemists we are inclined to accept that estimation. But the dignity of his profession was always in Weber's mind and because of his influence during his few months in Boston we may each take new pride that we are chemists."

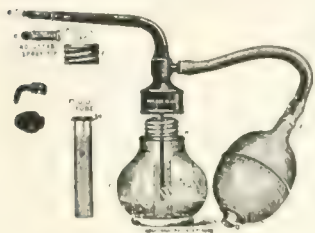
## BRITISH ENTERPRISE IN BRAZIL.

UNDER the above heading *The British Trade Journal* (London) prints a letter from a correspondent at Pará, in which the preëminence of British trade in northern Brazil is referred to in detail. It is stated that fully two-thirds of the goods on sale in the stores of Pará and Manáos come from Great Britain, and that "public confidence in British houses and British methods of conducting business is undoubtedly firmly established and wholly unassailable." The more important undertakings in the way of public enterprise are in English hands, such as the city tramways and electric and gas lighting in Pará, the Manáos Harbor, Limited, and the Amazon Steam Navigation Co., Limited. The Manáos Harbor company, which handled 300,000 tons of goods last year, all of which paid tribute to it, is described as being intimately connected with the Booth Steamship Co., Limited, of Liverpool, who possess a practical monopoly of the cargo and passenger carrying trade between England and the Amazon. The correspondent asserts that money is being made fast in Pará and Manáos, and is being invested freely in new buildings and other improvements. He predicts a rapid expansion of business and points to the promise of good returns on British capital.

## NEW GOODS AND SPECIALTIES IN RUBBER.

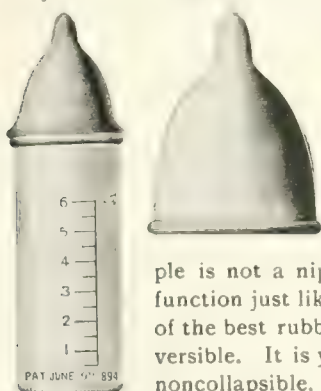
## THE "CENTURY" ADJUSTABLE ATOMIZER NO. 10.

THE atomizer illustrated herewith possesses some important advantages which are peculiar to it. The principal advantage consists in its ability to spray two liquids from the same atomizer, the large outside bottle being used for the aqueous liquid, and the small vial which slips inside it for spraying minute quantities of heavier liquids. By a simple adjustment of the spray tip this atomizer is regulated for either liquid. As will readily be seen, this arrangement saves the expense of two separate atomizers, while each liquid is kept entirely distinct, and can be used without waste. It is recommended especially for catarrhal cases, where the use of a cleansing liquid is generally followed by healing spray composed of an oily preparation. [The S. H. Wetmore Co., No. 240 Pearl street, New York.]



## THE "HYGEIA" NURSER.

As the illustrations show, the "Hygeia" nurser, which has lately been introduced to the trade, consists of two parts, a breast and a cell. In this it differs from the ordinary nursing bottle, which consists of a bottle with a neck, to which a nipple is attached. The "Hygeia" nurser can be filled without a funnel, and cleaned without a brush, just as a tumbler is cleaned. The nipple is not a nipple at all, but is in form and function just like a mother's breast. It is made of the best rubber, seamless, reinforced, and reversible. It is yielding, like an air cushion, it is noncollapsible, and can be turned inside out for cleaning. One advantage of the likeness of this device to the natural breast is that many infants will go from one to the other without seeming to appreciate the difference. This is an important feature, especially at weaning time, or when there is a deficiency in the natural supply of milk, making necessary an artificial accessory. The same firm supply sterilizers fitted especially for this device. [The Hygeia Nursing Bottle Co., No. 242 Ashland avenue, Buffalo, New York.]



## ROJO'S ASEPTIC RUBBER DAM HOLDER.

THE name "Aseptic" has been applied to this new holder for dentists' use for reason that, unlike other rubber dam holders, the elastic tape connecting the metal plate may be separated readily and instantly from the plate, thus enabling them to be disinfected by themselves. In this way the tape is not affected injuriously by the sterilizing process. This device is adapted for holding a napkin by means of springing clasps, so that the patient is not incommoded by frequent rearrangements, as might be the case were the napkin



loose, and this facilitates the work of the dentist himself. Moreover, this new shape is designed to best receive the pull of the tape and thus hold the plates in proper position. The dam is easily applied and adjusted by simply stretching it over the projecting ears of the plates. This is the invention of Dr. Jose J. Rojo; a patent has been applied for. [The S. S. White Dental Manufacturing Co., Philadelphia.]

## NO. 126 "BARCLAY" ATOMIZER.

THIS new article—a continuous spray atomizer for medicinal use—does not differ in construction from the No. 26 Barclay atomizer which has been on the market for some time past. It has a straight tip and screw cap fitting of hard rubber, as indicated in the illustration, and a bulb and tubing of soft rubber. The distinctive feature of the new atomizer is in the use of black rubber for the soft parts, as being less likely to become soiled through use, and thereby insuring the continued good appearance. [Whitall Tatum Co., Nos. 46-48 Barclay street, New York.]



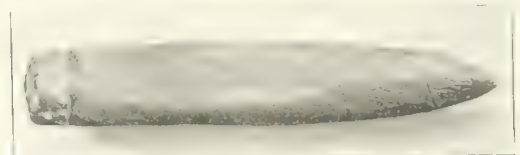
## THE "CANTON" RUBBER SOAP TRAY.

THIS article is offered for the appreciation of those who have been troubled with the porcelain or china soap dish slipping from a marble washstand into the bowl, with a clatter and usual breakage. Its character prevents slipping, noise, and breaking. It is made of a good quality of rubber, and the standard color is a rich maroon. It may be ordered if desired in white or black, but maroon will be sent unless otherwise specified. [The Canton Rubber Co., Canton, Ohio.]



## COUNTERFEIT CIGARS.

EVERY smoker knows that there are cigars and cigars, and very few good ones. Exactly what genius it was that invented



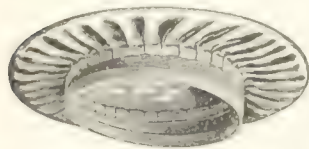
the rubber cigar, no one seems to know. As the illustration shows, it has a certain likeness to a real Havana. Its color is all right, and even the white ash at the tip gives it quite a realistic effect, but exactly how any smoker could be deceived by it does not appear. These cigars are turned out by a little German rubber factory and they are displayed in the windows of many European rubber stores. It is possible, of course, that some inveterate smoker might buy an article of this kind, which is thoroughly "anti-nicotine," and make believe smoke



when self deception was necessary, but the prediction that the rubber cigar will ever come into common use is wholly without basis.

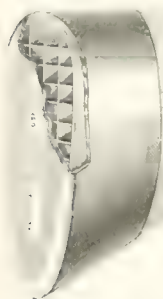
#### BATHING CAPS FOR DOLLS.

It is when winter has its strongest hold that supply houses everywhere are laying in a stock of summer goods. Just how many of them carry doll's bathing caps is a question, but next season's sales are already beginning; and it is pleasant to feel that during the coming summer no doll, even if she be without wealth or kindred, need take her daily dip in the ocean with her flaxen hair unprotected. The illustration shows the only doll's bathing cap that the Four Hundred wear, and is manufactured by Parker, Stearns & Sutton, New York.



#### "BENTON" PNEUMATIC GUN RECOIL PAD.

THIS new pad is composed of 66 cube shaped air cells each independent of the other and hermetically sealed. It thus retains the natural atmosphere; in other words, it is a cushion of air and rubber that protects the user from injury caused by recoil of the gun. While it is purely pneumatic, as will be seen by the illustration, at the same time the pad is not inflated, and punctures or tears do not materially affect it. There are involved no valves, no pumps, and no rubber tubing; the pad is always ready for service and cannot get out of order; and it is referred to as being made of a fine grade of rubber. It is the subject of United States patent No. 779,461. [American Pneumatic Cushion Co., No. 221 Canal street, New York.]



#### NEW TRADE PUBLICATIONS.

THE GUTTA PERCHA AND RUBBER MANUFACTURING CO. (New York) signalize the beginning of their second half century in the industry by the issue of their Catalogue No. 75, devoted to Mechanical Rubber Goods. This catalogue, while including all the staple lines of mechanicals, gives special prominence to a number of articles which either are not included at all in the catalogues of some other companies, or receive only scant mention in them. For example, the first item is Vanner Belts, besides which elevator belting, conveyor belting; air drill, brewers', oil, pneumatic, and divers' hose are specially mentioned. The company's new vulcanized mosaic multi-colored Tiling leads in the very full department of Mats and Matting, and, of course, the "Maltese Cross" brand of fire hose has full attention. Fire hose accessories, rubber covered rolls, billiard cushions, and the like complete the list. [6" x 9 1/4". 78 pages.]

OSGOOD SAYEN (Philadelphia) issues a new Catalogue of Specialties, including "Torpedo-Asbestos" packing, "Johnson" patent vulcanite rubber packing, and various other lines of packings and hose, together with the well known "Johnson" patent vulcanite rubber valve. The right for manufacturing the Johnson specialties is now owned by this house. [5 1/4" x 7 1/4". 18 pages.]

THE HARTFORD RUBBER WORKS CO. (Hartford, Connecticut) issue a book descriptive of the Turner Endless Solid Tire, with illustrations of the different styles and prices, which go as high as \$265.50 per tire for the size 60" x 7 1/2". [3 1/2" x 6". 21 pages.]

THE Philadelphia branch of the CONSOLIDATED RUBBER TIRE CO., F. A. Kissell, manager, under date of February 10, sent out a handsome brochure entitled "Ten Prosperous Years," by way of commemorating the tenth anniversary of the agency referred to.

BANNER RUBBER CO.—Successors to Monarch Rubber Co. (St. Louis, Missouri) issue an illustrated catalogue of their "Sunset" and "Prairie" brands of boots and shoes, which contains full details of their plan for selling direct to the retailers. They announce that they do not sell to jobbers, and the advantage to their customers of the new plan outlined at length. [6 3/4" x 10 1/8". 36 pages.] Also: Price List and Discount Sheet. 4 pages.

MERCHANTS' RUBBER CO.—William Morse, president (New York), have issued their yearly catalogue of Rubber Shoes and Clothing, which, as usual, is comprehensive, as well as attractive in appearance. A point of interest to be noted is the prominence given, in the pages devoted to clothing, to Cravenette rain coats. [6" x 6 3/4". 63 pages.]

THE FAULTLESS RUBBER CO. (Akron, Ohio) have issued a booklet describing the "Faultless" seamless rubber goods, including fountain syringes, rubber gloves, and other specialties. Prominence is given to the company's "American" rubber sponge, besides which there are toilet brushes and other items in this line. [6 3/4" x 4 3/4". 20 pages.]

THE NATIONAL CEMENT AND RUBBER MANUFACTURING CO. (Toledo, Ohio), who began in the early days of the bicycle trade, the manufacture of rubber cements and accessories for bicycle repairs, have extended their trade to adapt it to the automobile era. Their 1905 catalogue embraces a number of grades of cements for the purposes above indicated, together with tire tapes, braziers, vulcanizers, and the like; also, cement for use in the cobblers' and other trades. [4" x 7". 72 pages.]

THE CANTON RUBBER CO. (Canton, Ohio) have issued a new edition of their list of seamless rubber goods, which they designate "Catalogue C." In addition to the druggists' and household sundries listed hitherto, the present catalogue includes several toilet novelties—rubber bath brushes and the like; a new patent tire for baby carriages, which branch of the trade is of no mean extent, and also rubber toys and balls. [5 1/2" x 7 1/2". 28 pages.]

#### ALSO RECEIVED.

C. J. BAILEY & CO., Boston.—Bailey's "Won't Slip" Automobile Tires. 8 pages.

The B. F. Goodrich Co., 7, Snow hill, London.—Hot Water Bottles. 4 pages.

Marble Safety Axe Co., Gladstone, Michigan.—Marble's Specialties for Sportsmen. 32 pages.

Fox, Fultz & Co., Boston, and Lillibridge-Weeks-Thurlo Co., New York.—*The Druggist Sundryman*. October, 1904. 32 pages.

Foster Rubber Co., Boston.—The Foster Rubber Heel and Sole. 4 pages.

The Gilbert Manufacturing Co., New Haven, Connecticut.—Automobile Fabric Supplies. 6 pages.

Land- und Seekabelwerke Aktiengesellschaft, Cologne, Germany.—[Circular descriptive of insulated wire and cable products.] 4 pages.

Boston Belting Co., Boston.—Rubber Covered Truck Wheels. 6 pages.

The Faultless Rubber Co., Akron Ohio.—Indispensable Requisites for Protection of Hands. [Rubber Gloves.] 6 pages.

Chicago Pneumatic Tool Co., Chicago.—*Something Pneumatic*. September, 1904. 20 pages.

The Republic Rubber Tire and Shoe Co., New York.—Price List for "Republic" Non-Skid [Tire] Covers. 4 pages.

Rubber Appliance Co., Springfield, Massachusetts.—The Water Tank and Wash Basin (combined). 4 pages.

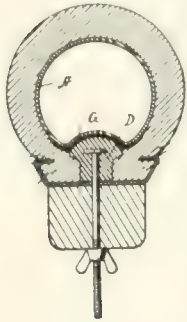
## RECENT RUBBER PATENTS.

## UNITED STATES OF AMERICA.

ISSUED JANUARY 10, 1905.

**N**O. 779,404. Life preserver for railway cars. [Comprising coils of spring wire, with elastic coverings.] W. W. Annable, Grand Rapids, Mich.

779,444. Pneumatic tire [having a sheath of strong, tough hide between the air tube and outer cover]. B. C. Rowell, Chicago.



779,505.

779,505. Vehicle tire. C. Stein, Akron, Ohio.

779,536. Combination tile for floor, walls, etc. J. T. Dickey and G. D. Derby, Barberton, Ohio.

779,561. Storm front for vehicles. H. D. Pursell, Washington Court House, Ohio.

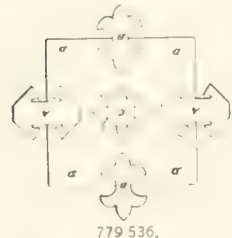
779,567. Reservoir attachment for pens. H. Tartsch, Konigsburg, Germany.

779,578. Tire cover [or fabric tire case]. F. E. Bowers, New Haven, Conn.

779,582. Nipple holder for nursing bottles. F. C. Brooke, Chicago.

779,588. Wheel tire [comprising tubular layers of textile material and a plurality of helical springs, the whole being encased in a covering of rubber]. J. S. Cushing, Norwood, Mass.

779,666. Belt conveying apparatus. T. Robins, Jr., assignor to The Robins Conveying Belt Co., both of New York city.



779,666.

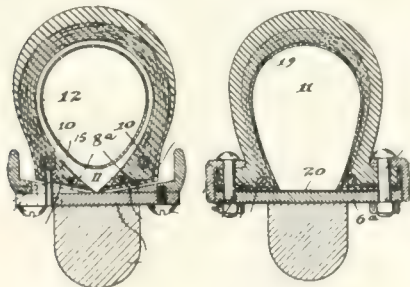
779,692. Fountain pen. J. H. Crowell, Vineyard Haven, Mass.

779,696. Process of and apparatus for the separation of gum from rubber plants. F. Ephraim, assignor of one-half to A. Raas, both of San Francisco.

779,702. Pneumatic tire for vehicles [comprising an outer tube and a series of inflated oblate spheroidal balls contained under pressure within the casing]. S. W. Fuller, Malden, Mass.

779,730. Vehicle tire. [Pneumatic.] J. Neary, assignor to Kokomo Rubber Co., both of Kokomo, Ind.

779,731. Vehicle tire. [Pneumatic.] Same.



779,730.

779,731.

New York city.

779,849. Folding storm shield for vehicles. C. M. Harvey, St. Louis.

779,894. Combined eraser and pencil sharpener. C. Wetzel, Chester, W. Va.



779,894.

779,974. Cushion heel. F. W. Sharpe, Denver, Colo.

ISSUED JANUARY 17, 1905.

780,044. Rubber tire [solid; endless; adapted to a channel rim with removable side flanges]. A. S. Krotz, Springfield, Ohio, assignor to Consolidated Rubber Tire Co.

780,051. Detachable tire cover. F. Mesinger, New York city.

780,077. Medical vaporizer. J. E. Van Ness, Chicago, assignor of one-half to S. W. Gage, Evanston, Ill.

780,140. Air tube for pneumatic tires. J. R. Taylor, Wandsworth Common, England.

780,154. Rubber tire [solid; retained by means of bolts passing through the rubber and the flanges of the channel rim]. C. H. Bryan, Chicago.

780,155. Rubber tire. Same.

780,209. Fastening for wheel tires. A. Von Lüde, assignor to Mittel-

deutsche Gummiwaren-Fabrik Louis Peter, Frankfurt o/M., Germany.

780,274. Horseshoe. C. F. M. Fish, Chelmsford, Mass.

780,416. Fountain pen. A. Eberstein, Winthrop, Mass., assignor to C. Brandt, Boston.

780,421. Dress shield. V. Guinzburg, New York city, assignor to I. B. Kleinert Rubber Co.

780,424. Inhaler. T. Heryng, Warsaw, Russia.

780,452. Pneumatic tire. W. Struck, Friedenau, assignor to B. Polack, Waltershausen, Germany.

780,457. Tire fastener. E. L. Thomas, Buffalo, N. Y.

780,462. Pneumatic tire. W. W. Walter, Aurora, assignor of one-half to J. D. Miller, Geneva, Ill.

ISSUED JANUARY 24, 1905.

780,495. Metallic packing [consisting of a core of metal threads, covered with a composition of rubber and graphite]. E. L. Clark, Auburndale, assignor to H. J. Livermore, trustee, Medford, Mass.

780,513. Holder for overshoes, rubbers or the like [to keep them on the feet of the wearer]. A. E. Lotstrom, Burlington, Wash.

780,516. Machine for cleaning carpets, rugs or similar articles. S. B. and S. G. Mead, assignors to The American Pneumatic Carpet Cleaning Co., all of Cincinnati.

780,519. Pneumatic tire. W. J. and J. R. Mitchell, assignors to Flexible Metal Manufacturing Co., all of Lynn, Mass.

780,551. Hot water bottle. B. J. Craggy, Manchester, N. H.

780,563. Eye irrigator. F. E. Girard, Toledo, Ohio.

780,582. Golf ball. F. H. Richards, Hartford, Conn.

780,632. Moth and bug proof receptacle for clothing. W. D. Ballou, Belding, Mich.

780,667. Cutting machine for rubber type or the like. B. F. Kern and W. J. O. Johnson (said Johnson assignor to H. S. Folger) both of Chicago.

780,684. Chair tip. P. W. Pratt, Boston.

780,710. Nozzle for [vaginal] syringes. H. Dickinson, Flushing, N. Y.

ISSUED JANUARY 31, 1905.

780,972. Grinding machine. D. R. Brown, Ansonia, Conn., assignor to Farrel Foundry and Machine Co.

780,983. Vehicle tire. C. W. Faitoute, Summit, N. J.

781,262. Vehicle wheel [embracing a channeled rim for a rubber tire, the seat of the channel being corrugated]. Z. Xevers, Santa Cruz, Cal.

781,286. Method of making wheel tires. A. DeLaski, Weehawken, N. J.

781,461. Wheel [with a specially designed rim adapted to pneumatic tires]. J. C. Raymond, New York city.

781,516. Respirator and inhaler. G. N. Guthrie, Jr., Cookeville, Tenn.

81,587. Rubber disk for dental use. J. E. Blake, Amesbury, Mass.

Design.

37,313. Motor-car horn. F. Berton-Houel, Paris, France. *Claim*—The ornamental design for a motor-car horn.

Trade Marks.

44,096. Balloons. H. Kayser & Fils, New York city. *Essential feature*.—The words THE METEOR associated with the letters XX. Used since March, 1894.

44,112. Rubber lined hose. Bowers Rubber Co., San Francisco. *Essential feature*.—The representation of a red-colored woven textile covering for rubber lined hose having incorporated therein two broken parallel longitudinally extending black distinguishing lines, said lines being formed by the warps incorporated in the fabric and extending the entire length of the covering. Used since March 1, 1904.

44,113. Rubber lined hose. Same. *Essential feature*.—The representation of an orange-colored woven textile covering, with other features as stated above. Used since March 1, 1904.

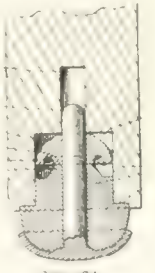
[NOTE.—Printed copies of specifications of United States patents may be obtained from THE INDIA RUBBER WORLD office at 10 cents each, postpaid.]



40.



780,551.



781,262.



## GREAT BRITAIN AND IRELAND.

## PATENT SPECIFICATIONS PUBLISHED.

The following are the titles of the Patents at the Office of the Application which in the course of the year 1904 were granted.

(Listed in the Official Journal, January 11, 1905.)

[ABSTRACTED IN THE OFFICIAL JOURNAL, JAN. 11, 1905.]

- 20,081 (1903). Boot laces [for use in surgical treatment]. J. Otterbein, Eichstetten, Germany.
- 20,129 (1903). Waterproof aprons [for use by motorists for protecting the legs]. N. J. Faquin, Paris, France.
- 20,139 (1903). Vehicle wheel [involving plungers working in cylinders, by means of which and compressed air resiliency is obtained; provided with rim sections carrying rubber tires]. W. R. Fasey, Snarebrook, Essex.
- \*20,142 (1903). Self-filling fountain pen. A. E. Schaaf, Toledo, Ohio.
- 20,316 (1903). Chest expander or exerciser. T. Barth and W. Kampschelte, Solingen, Germany.
- 20,319 (1903). Bath. [A portable douching apparatus.] H. Brandes, Hamburg, Germany.
- 20,338 (1903). Solid rubber tire [with means of retaining the same in the channel rim]. C. Challiner, Manchester.
- 20,359 (1903). Elastic tire [consisting of a hoop of coiled wire, with an outer cover of rubber]. C. Hammer, Manchester.
- 20,369 (1903). Air cushion or water cushion [with special means for inflation]. C. Glass, Oschersleben, Germany.
- \*20,395 (1903). Pneumatic tire [comprising a special tubular fabric]. P. D. Thropp and A. de Laski, Trenton, New Jersey.
- 20,444 (1903). Elastic tire [made by rolling sheets of rubber into a cylindrical form, with or without a central air space]. R. Bell, Amisfield, near Dumfries.
- 20,464 (1903). Protective covering for pneumatic tires. W. Heatley, Willesten, Middlesex.
- 20,473 (1903). Heel protector. J. Thomas, Bath.

[ABSTRACTED IN THE OFFICIAL JOURNAL, JANUARY 18, 1905.]

- 20,708 (1903). Revolvable heel pads for boots. I. Frankenburg, Ltd. and R. J. Frankenburg, Salford, Manchester.
- 20,816 (1903). Pads for table legs. T. Anspach, Mannheim, Germany.
- 20,918 (1903). Dental trough [of soft rubber, for use in applying medicaments to the teeth or gums]. P. Edgelow, London.
- 20,983 (1903). Hand stamp. J. A. Jackson, Birmingham.

[ABSTRACTED IN THE OFFICIAL JOURNAL, JANUARY 18, 1905.]

- 21,190 (1903). Driving belt for motor cycles. [Consists of wire helix surrounding a core of rubber or other material; an outer covering of rubber may be added.] Y. A. Calderwood, London.
- 21,242 (1903). Revolving heel pad [in which ebonite or vulcanite is used instead of the usual metal plates]. G. W. Dawes, West Didsbury, near Manchester.
- 21,266 (1903). Pneumatic tire with puncture resisting cover. H. W. Cave-Browne-Cave, London.
- \*21,402 (1903). Bedclothes holder. S. A. Coffman, Paris, Illinois.
- 21,499 (1903). Fishing bait. J. B. Jakobsen, Steigen, Norway.
- 21,500 (1903). Inhaler [for administering anesthetics]. J. Lorjois, London.
- 21,536 (1903). Boot heels [with wooden or metallic core, fitted with rubber covering]. F. W. M. de La Cose, Easebourne, Sussex.
- 21,546 (1903). Solid tire with special retaining means. C. Challiner, Manchester.

[ABSTRACTED IN THE OFFICIAL JOURNAL, FEBRUARY 4, 1905.]

- 21,600 (1903). Billiard table [having spot marks, pocket mouths, etc., formed of rubber to prevent the cloth from being injured owing to the ball being continually placed thereon]. S. A. Sisson, Huddersfield.
- 21,605 (1903). Solid rubber vehicle tire. T. Gare, New Brighton.
- 21,684 (1903). Gymnastic apparatus or exercise. T. Barth and W. Kampschulte, Solingen, Germany.
- 21,690 (1903). Pneumatic motor tire. H. W. Dover, St. James, Northampton.
- 21,722 (1903). Vehicle wheel [with rubber layer between the felloe and metal rim]. T. Gare, New Brighton.
- 21,785 (1903). Flexible tubing [formed by applying a waterproof coating to a closely wound helical coil of wire]. J. Dring, London.
- 21,816 (1903). Heel pad. F. W. Burn, Manchester.
- 21,867 (1903). Pneumatic tire [with puncture preventing band of

leather.] F. D. Wilton and R. W. Cox, Birmingham.

\*21,890 (1903). Process for preparing rubber from various shrubs. W. A. Lawrence, Brooklyn, New York. [The process is the subject of several American patents granted to Mr. Lawrence and assigned to the Continental Rubber Co.]

22,002 (1903). Driving belt [formed of canvas impregnated with India-rubber, Gutta-percha, or Balata.] W. A. Shaw, trading as R. Lloyd & Co., Birmingham.

22,019 (1903). Heel protector for boots. E. T. Spencer, London.

22,035 (1903). Waterproof cloak for motorists. T. H. Holding, London.

22,074 (1903). Life belt. G. W. Mitchell, Lunenburg, and J. A. Johnson, Halifax, Nova Scotia.

## GERMAN EMPIRE.

## PATENTS GRANTED.

158,486 (Class 77a). Golf ball composed of an elastic core wound with rubber threads under tension. R. Appleyard, Silvertown, England. Jan. 4.

158,298 (Cl. 63e). Pneumatic tire. Dr. T. J. Cooper and J. D. Smith, Paterson, New Jersey. Jan. 4.

DESIGN PATENTS GRANTED [GEBRAUCHSMUSTER].

240,250 (Class 39). Vulcanized fiber plate fastened with rubber to a textile material, to stiffen the collars of garments. J. and M. Miess, Coblenz. Jan. 4.

239,742 (Cl. 30a). Air cushion. F. Rosset, Freiburg i/Br. Jan. 4.

240,207 (Cl. 30d). Tight fitting seamless elastic body band. D. Grote, Nachf., Barmen. Jan. 4.

240,764 (Cl. 63e). Air tube for tires strengthened in cross section by a stiffening insert of woven material. E. Lange, Gotha. Jan. 11.

240,360 (Cl. 8d). Wringer roll, consisting of a number of rubber rings fixed upon an axis, having a provision for leading off the expressed fluid. C. Kampmann, Jr., Mülheim a/ Ruhr. Jan. 11.

240,302 (Cl. 30d). Abdominal band, knit in one piece and made elastic by the working in of rubber bands. Frau Melitta Hohm, Hartenstein. Jan. 11.

240,358 (Cl. 63e). Device for avoiding danger from the bursting of automobile tires. A. von Hasperg, Baden-Baden. Jan. 11.

240,359 (Cl. 63e). Vehicle tire having felloe in two parts, containing depressions on its periphery for the purpose of tightly enclosing the protective tread. A. von Hasperg, Baden-Baden. Jan. 11.

240,730 (Cl. 63e). Inner tube for tires. Vereinigte Berlin-Frankfurter Gummivaaren-Fabriken, Gelnhausen. Jan. 11.

240,732 (Cl. 63e). Inner tube for tires. Same. Jan. 11.

## APPLICATIONS.

35,713 (Class 63e). Elastic tire. A. Boguslavski, London, England. Jan. 4.

36,969 (Cl. 63e). Elastic tire. R. Bell, Dumfries, Scotland. Jan. 4.

## THE FRENCH REPUBLIC.

## PATENTS ISSUED (WITH DATES OF APPLICATION).

345,795 (Aug. 13, 1904). L. A. Mercier. Pneumatic tire.

345,879 (Aug. 26). J. Duva' and H. Bedet. Pneumatic tire.

345,895 (Aug. 27). M. Cau and B. Delorme. Pneumatic tire.

345,926 (Aug. 29). H. Penher. Apparatus for separating vulcanized rubber from textile materials or metallic substances combined with it, or form coatings (glazing materials, paint, etc.) or such like substances.

345,952 (Aug. 31). C. J. Pegion. Motor tire.

346,025 (Sept. 3). E. Cadavea. Pneumatic tire.

346,178 (Sept. 12). C. Beau. Pneumatic tire protector.

346,180 (July 11). A. L. Cadé. Protective anti skidding metallic buttons for wheel tires.

346,251 (Sept. 15). P. N. Fawcett and E. D. W. Bellhouse. Pneumatic tire.

346,245 (April 27). A. L. Fayel. Means of repairing tire inner tubes.

346,369 (Sept. 20). H. Eiehsen. Process for the manufacture of a rubber substitute.

346,531 (Sept. 7). H. Kirstaetter. Pneumatic tire for bicycles and other vehicles.

346,648 (Aug. 25). O. Albrecht. Protective shield device for tires.

346,636 (Sept. 28). J. C. Dunois. Anti skidding tire protector.

[NOTE.—Printed copies of specifications of French patents may be obtained from R. Bobet, Ingenieur-Conseil, 16 avenue de Villiers, Paris, at 50 cents each, post paid.]

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# NEW YORK BELTING *and* PACKING CO., Ltd.

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Engine and Tender, Fire, Garden, Gas, Linen, Mill, Pneumatic Tool  
Signal, Steam, Suction and Water Hose

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ECCE SIGNUM,



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If you cannot get quick deliveries,  
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IN ANY EVENT,

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QUOTATIONS. . . . .  
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*Mention the India Rubber World when you write.*

## NEW ENGLAND RUBBER CLUB MIDWINTER DINNER.

A NOTABLE event in the history of the New England Rubber Club was the annual midwinter dinner, at Youngs' Hotel, Boston, on Friday evening, February 24. It is customary at these gatherings to get together early, *i. e.*, at 5.30 in the afternoon, and have an hour of social converse, after which comes the dinner and then the oratory, all being finished in time for the out of town members of the Club to catch their trains without undue effort. Such a program was observed at the recent dinner.

In the hotel reception parlor the officers of the Club acted as a reception committee, and at 6.30 o'clock, headed by the Hon. L. D. Apsley, president of the Club, and the distinguished guests, the diners proceeded into the large banquet hall, where covers had been laid for 170 persons. In the middle of the speaker's table was a handsome floral centerpiece, while at the plate of each guest was a neat *boutonniere*.

The gentlemen at the speaker's table were Messrs. L. D. Apsley, president of the Club; John D. Long, late United States secretary of the navy; Samuel P. Colt, president of the United States Rubber Co.; the Rev. John Baltzly, William R. Dupee, Robert D. Evans, George H. Hood, Joseph Davol, A. H. Alden, Arthur W. Stedman, Erskine M. Phelps, John H. Flint, Frank Poel, Henry C. Morse, Ex-Governor A. O. Bourn, George P. Whitmore, and Henry C. Pearson.

At right angles to this table were four long tables at which the Club members and their guests disposed themselves in accordance with a somewhat elastic but well arranged seating schedule. The *menu*, which was Young's choicest, is reproduced on this page. The music was furnished by Partridge's orchestra, of Boston, and was most excellent.

A list of those present reveals the fact that not only was the whole of the New England rubber trade out in force, but New York, Chicago, and other centers were well represented. Members of the executive and manufacturing staff of the United States Rubber Co. were also present in force, and showed by their attention and applause that their president was not only respected but most popular.

## PRESIDENT APSLEY'S ADDRESS.

GENTLEMEN: To our distinguished guests, members of the Club, and friends, I extend a most cordial welcome.

During the year just ending our Club has suffered the loss of five of its members by death, among whom were Hon. Elisha S. Converse, honorary president of the Club and Mr. George A. Alden, one of our honorary vice presidents, both of whom, by their conspicuous business ability and integrity, made their way to the very front rank in their respective

lines of business, and at the same time won the highest regard of the members of this Club by the excellence of their personal characters.

The New England Rubber Club was never in as prosperous a condition as it now is, its membership being the largest in its history. Our banquets, smoke talks, and midsummer outings have all been largely attended and most thoroughly enjoyed, and I trust that these most agreeable gatherings will always be as successful and will afford equal pleasure, but I must repeat once more that I feel that trade organizations in general, and this Club in particular, should justify themselves by something besides having these good times.

I recall our first banquet after organizing, given some years ago at the Trade Club. When asked to say a word as to the desirability of clubs, I made the claim then that their existence could be amply justified, and went further and said that they were as essen-

tial and as helpful to men in business as the schoolhouse was to us when we were boys. I made this declaration believing that by coming in close contact with each other, the narrow business men rubbing up against the stronger ones, all are broadened and greatly benefited.

The great business brains and wealth of the country are found in these clubs, and if these organizations could be made to think less of the social features and be made to realize what a power they possess, what a mighty influence they could exert, my claim would not be too broad.

I would like to see every reformer, educator, and especially the clergymen, made members of these clubs by special invitation, without paying the initiation fees or annual dues, as they would be helped in their work by meeting and getting the views of these practical business men.

It is not the plodder in business who does not belong to clubs and confines himself closely to the four walls of his counting room, that makes the greatest success for himself or does the things that make such mighty progress and advancement in civilization. It is the Morgans, John Wanamakers, and Marshall Fields who, through the environment of churches and clubs, meet and confer with their fellow men, who help themselves, and confer mighty benefits upon those who come in contact with them.

So much for clubs in general. Now a word about trade clubs. There are some forty of these organizations in the state of Massachusetts with memberships varying from 100 upwards. I refer to trade clubs only, or business men's organizations.

What an influence they might exert on state or national questions where the judgment of sound, practical, experienced business men is needed—judgments free from the influence of political organizations or of any organization composed of theorists—the judgment of men who



HON. L. D. APSLEY,  
PRESIDENT OF THE CLUB.

## MENU

Cotuit Oysters	
Chicken Okra	Consommé Jardiniere
Celery	Radishes
Boiled Halibut, Egg Sauce	
Potatoes Hollandaise	
Sirloin of Beef Larded, with Mushrooms	
Roast Duck	
Vol au Vent à la Reine Margot	
Oysters, Poulette	
Pears, Richelieu	
Bombe Glacé	Chocolate Bavarian Cream
Ice Cream	Sherbert
Fruit	Cheese
	Coffee
	Olives



would approach all questions with a business man's training. Necessarily they would consult counsel, but they would with sound judgment retain as counsel men of the greatest ability and of the very highest integrity. In looking for such men, they would no doubt at once confer with our two distinguished guests on my right and left, who so fully meet these requirements.

What a benefit they could confer upon the business interests of the country at the present time in helping the majority or minority to wisely shape the legislation regarding the national bankrupt law which is now under fire and affects business men only; the regulation of freight rates; reciprocity and many other important questions, which are purely business propositions and should be dealt with as such. All party, political and selfish interests would be eliminated and their influence would be greatly weakened if these trade clubs, made up as they are of business men, would take such subjects in hand.

Realizing the desirability of what I have said, I would like to see these trade clubs take up this all important work, and as our annual meeting occurs in April, it may not be amiss for me at this time to suggest some work that this Club might do another year.

Let the New England Rubber Club appoint a committee of five of its ablest men and invite each of the other forty trade organizations to do the same, and as they would no doubt each one select five of their ablest men a committee of two hundred of the very strongest business men in the state would come together in one organization and take up and fully discuss many important questions, after which they could report back to their various clubs, when the membership of the forty clubs could take action which would make their influence felt.

In no other way would it be possible to select a committee of two hundred as strong business men, as each body would wish to be ably represented and their best men would undoubtedly serve, as they would feel honored at being selected from among their associates to represent their club. Their influence would be immeasurable, and it would offset largely that of the impracticable newspaper writer who too often is only a theorist, but writes well and therefore shapes many times the opinions of men who have not time to thoroughly consider very many important questions.

Gentlemen: We have had many red letter days in the history of our Club when it has met in the banquet hall. It has been honored by the presence, and has listened to words of wit and wisdom from men who, by their exceptional ability and attainments, have made their mark in the state and in the nation.

In fact, we have become so accustomed to having the very best at our banquets, not only on our tables but in the feast of reason which so naturally follows the feast of eatables, that it is becoming more and more difficult to satisfy our natural desire that the last shall be the best.

As this is to be the last banquet over which it will be my duty to preside, I confess to having had the ambition to bring together at this time such elements as would make this the most profitable and most enjoyable occasion in the history of the Club, and I am especially fortunate to-night in being able to present to you as the first speaker, one whose introduction to you would be superfluous, in fact, one who needs no introduction to any citizen of the state he honored by being its governor, or of the nation which at a critical time, when its world policy was taking on new and larger proportions, had as the director of its naval affairs, our distinguished guest at my right.

Gentlemen of the Club, I do not know your feelings in regard to monopolies and monopolists in business lines, but I do know your feelings toward our honored guest, who is one of the greatest monopolists of the age, for, as a result of his long, useful and brilliant career in the state and nation, in his life as a citizen and statesman, he has monopolized the love, not less than the respect of all who knew him. I present to you the Hon. John D. Long.

#### MR. LONG'S ADDRESS.

THE name of Ex-Governor Long was the signal for a most enthusiastic welcome, the audience rising and cheering until the great hall echoed with welcome. In his own inimitable way he made fun for ten minutes before settling down to his theme. He agreed that he knew little of India-rubber, but opined that had Leander possessed rubber boots he would have waded the Hellespont instead of swimming. Noting that one half of the Pilgrims died during their first year in the New World, he said, they might have been saved by Apsley rubbers. Pausing a moment he explained that he advertised that maker of goods because the toastmaster had so well advertised him

that his office hours were from 10 to 5 and that Apsley got a commission on all business that came in as a result of that dinner. To say that these bits of local fun were appreciated is stating a fact with far too much mildness. He then paid his respects to the company as "Captains of Industry," and said:

I am not at all sure that the time is not rapidly approaching when we shall be obliged to reform our public schools. It seems to me as if we were training our children out of the old industrial habit. Isn't it true that the time has come when it is desirable to create in our schools a great respect for industrial education? The academic life is not enough to meet the interests of the coming time. The minute you have established your technical school you will have solved the social problem itself, helped to break down the class distinction of which we hear so much.

He made a masterly plea for universal peace for which most great industries stand, and referring specifically to the rubber trade said it typified health, cultivation in the arts, and further development toward the sweet beneficence of peace.

Most graphically he pictured the struggles and triumphs of Charles Goodyear and said, amid a burst of applause, that a statue to the great inventor would mean more to civilization than one to the greatest of military heroes. "Were the angel of Ben Adhem's dream now to appear, the name of Goodyear would lead all the rest."

He spoke tenderly and reverently of his life long friend, the late E. S. Converse, as of the American great in industrial affairs, and yet an ideal type of one who lived the simple life. He declared himself against the attitude of President Roosevelt in regard to the Monroe Doctrine and the navy. He said that in his opinion it is not desirable that this country should become a collector of debts for Europe against the South American republics. He asserted that, while he believed in a large navy, he was opposed to a large immediate increase, on the ground that it would tend to create a reaction on the part of the people, and that it would be impossible to secure men to man properly such a navy as is now in prospect under the plans of the administration.



HON. JOHN D. LONG.

FORMER GOVERNOR OF MASSACHUSETTS. LATE  
UNITED STATES SECRETARY OF THE NAVY.  
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The benefits from war are of very doubtful value. They are not the steady flowing stream upon which you can rely. They are rather like a torrent that destroys as much as it carries. You are engaged in the beneficence of peace. I think we may all rejoice that our country now is in a condition of peace, that all the tendencies of our national life are in that direction. It is my earnest hope that we shall so continue, and that is one of the reasons why I think we are carrying this Monroe Doctrine a little too far. There is great danger that it may be carried to the point where it will result in unpleasant complications. I do not think it is desirable for us to become the collector of debts for all the nations of Europe which may hold claims against the South American republics. It may be of no consequence so far as San Domingo is concerned, but it is very questionable in my mind whether we ought to assume a position which is liable to lead, not to peace, but to dangerous complications with other nations.

I am one of those who do not just at this time look favorably upon a rapid increase of our navy. I believe we should have a large navy. I saw the need of that when I was secretary of the navy. I believe we need a large navy more than we need a large army. We need it as a national defence. But it is not desirable that we have it so large that by that very fact we shall seek complications with foreign Powers which we would not seek if we did not have a large navy. We have at the present time a very good navy. We have something like 14 very good battleships and cruisers. There are also under construction 24 battleships and armored cruisers, which will be built in the next few years. We shall then have 38 battleships and cruisers, and we have not to-day men and officers enough to man these ships.

For my part, I should be content with building one new battleship or none this year. I fear the large increase in our navy which is planned will produce a reaction on the part of our people against a large navy. And another reason why I object to it is that I fear we shall be unable to obtain men and officers enough properly to man such a navy.

#### THE REV. MR. BALTZLY'S ADDRESS.

The Chairman next said:

I regret exceedingly that, in place of introducing my friend Congressman Samuel W. McCall as the next speaker, I am obliged to read the following letter, which explains his absence [The letter was read.]

As we are deprived of having my political friend, I am pleased to be able to present to you my spiritual friend and adviser, to whom it has been both a pleasure and profit for me to listen for many years, and from what I know of the members of this Club, I am sure that you are all in need of a similar influence as much as I do. I have only been able to give him a very short notice, but the clergy are supposed to be emergency men, so I felt at liberty to call on him to fill the vacancy. I take great pleasure in presenting to you, the Rev. John Baltzly.

The Rev. Mr. Baltzly, of Hudson, Massachusetts, a young scholarly man burning with enthusiasm, had prepared a paper on "The Industrial Evolution and Some of the Sufferings of this Present Time." He began by skilfully contrasting the ancient and the modern world, sketching the standard of living in each, ending with a brilliant word picture of our present complex social organism. He showed graphically the position of the working man, his rights, his opportunities, and his natural tendency toward "Union." He went to the root of the

matter in his brief synopsis of strikes and of labor legislation. Then turning to the tendency of modern business toward consolidation, he described the modern organizing specialist, his work and his worth, nor did he hesitate to affirm that he believed combinations were natural and the "coming form of industrial organization." The paper as a whole was one of the most finished essays that the subject has yet called forth.

The Chairman said:

Our next and last speaker is one of our members who is known to you all and needs no introduction by me. Some of us possibly have reason to appreciate much more than others his keen business ability, but all recognize that he has it in a marked degree. He is to-day the head of the largest organization engaged in the rubber business in the United States, if not in the world, and we are, therefore, especially fortunate in getting him to speak to us as a business man, and if he will only let himself out and tell us a little of what he knows about the rubber business, some of us may gain some points that will help us in our efforts to compete with him. Welcome indeed is he to the fruits of his labors, and gladly do we welcome him here to-night, recognizing his power and splendid ability.

I present to you Colonel Samuel P. Colt.

Colonel Colt, whom all knew, but not as an after dinner speaker, was received most enthusiastically. He at once got the attention of the audience, speaking in a clear well modulated voice, gracefully complimenting Mr. Long, and the absent Mr. McCall, and during his speech paying a tribute to his competitors, Messrs. Apsley and Hood. His speech follows but unfortunately does not carry the witty asides, of which the speaker gave many, or the bursts of applause that often emphasized his points:

#### COLONEL COLT'S ADDRESS.

MR. PRESIDENT, INVITED GUESTS, AND GENTLEMEN OF THE NEW ENGLAND RUBBER CLUB: When your genial president, Mr. Apsley, invited me to be present at your banquet this evening, and to address the Club on any subject I might select, stating in his letter that Governor Long and Congressman McCall had both accepted a like invitation, I began to

think whether there was any subject that I might possibly know more about than the two eminent speakers who were to address you, and the only one I could think of was that of "Crude Rubber," and that is my excuse for selecting so dry a topic. Dryness, while not desirable in an after dinner speech, is, as all rubber manufacturers know, an excellent quality in *Crude Rubber*.

Before proceeding to a more formal discussion of the subject, it might be interesting to mention a few historical incidents connected with the history of the rubber industry.

The natives of South America made certain primitive uses of "Caoutchouc" (rubber) even before the days of Columbus. Rubber "bottles" were sent from Brazil to Boston in the year 1800—perhaps prophetic of the future hospitality of the Hub. But until the discovery of vulcanization by Charles Goodyear, about the year 1840, the uses of the gum were comparatively few. The name "Rubber" was first given to the substance in England, from its use as an eraser.

The story of Goodyear's experiments with the gum while in a debtor's jail in Philadelphia, and later over his cook stove, which, becoming overheated while he slept vulcanized the strips of rubber which he had suspended, may or may not be literally true, but they



HON. SAMUEL P. COLT,  
PRESIDENT UNITED STATES RUBBER CO.



are almost as familiar as Washington and his hatchet. Resulting from Goodyear's experiments, however, grew the mighty industry in which rubber importers and manufacturers are now engaged.

As an illustration of the growth of the industry let me refer to the career of a highly honored citizen of Massachusetts, the late Elisha S. Converse. Deacon Converse, as licensee under the Goodyear patents, started in 1853 the Boston Rubber Shoe Co. in a small wooden factory, with a capacity of a few hundred pairs of boots and shoes per day, and then looked forward, as he afterwards told me, to the time when he could reach a product of a thousand pairs per day; and yet he lived to see his great factories at Malden and Melrose manufacture 55,000 pairs of rubber boots and shoes per day. What better illustration can be given than this of the growth of the rubber industry in the past 50 years?

The future supply of "Caoutchouc," or "Crude Rubber," which is popularly supposed to *enter somewhat* into the products we manufacture or deal in, presents a most interesting and vital problem.

Representing, as you do, the rubber interests of New England in all its varied lines, it is not inappropriate at this time to call your attention to this subject, since, in my opinion the future prosperity of the rubber business, if not its very existence, hinges upon the satisfactory solution of the problem of obtaining in the future sufficient quantities of crude rubber for the world's requirements.

The consumption of rubber has extended to many new fields. In the electrical and other industrial arts, its use on an extensive scale has become indispensable. But more important than these material interests, the comfort and health of the great mass of our people are dependent upon the requisite supply of rubber products.

It follows that the failure of the rubber supply at the present time would fall little short of a national calamity, and that even a further substantial advance in price, owing to scarcity of production, is fraught with many evil results, not only to our business interests, but also to the well being of the millions of consumers of our goods.

This simple statement is enough to show that the present situation calls for our united and earnest efforts, to prevent, if possible, any falling off in the supply of this most important and necessary article.

From the figures just announced by the Department of Commerce and Labor, we find that in the past 20 years, or from 1884 to 1904, the imports of crude rubber into this country have increased from 24,000,000 pounds to 62,000,000 pounds per annum, and the annual value from \$10,000,000 to \$44,000,000.

The largest portion of this India-rubber comes from Brazil. That country furnished us last year 34,500,000 pounds, or more than half the entire importations, while Africa supplied most of the remainder. Comparatively small quantities were shipped from the Central American states and Mexico.

These rapidly increasing imports, together with the great advance in price, demonstrate that the present demand for crude rubber is greater than the normal supply. With our growing population, and the manifold and ever extending uses of this gum, there is no reason why the past ratio of increased demand should not continue for the next 20 years.

The question now arises, How are we to meet this situation? Can it be done by husbanding the supply through a more economical use? This is not practicable unless we reduce the quality of our product, an alternative which it would be most disastrous to adopt. Can we find some substitute? The outlook in this direction is not encouraging.

The range of substitutes is very narrow. In the few instances in which a substance resembling rubber has been discovered, the article has been so inferior, the cost of production has been so high, or the quantity produced so small, as to afford little prospect of relief from this source. The cultivation of the rubber tree, which has been undertaken in Mexico, Central America, Ceylon, and

other countries, although so far not a factor, may in time yield results.

It is evident that neither immediate nor permanent relief lies in these directions. Such relief must be looked for in increased production of rubber in those vast regions which are watered by the Amazon and the Congo. The growth of rubber trees extending inland from the banks of these rivers and their tributaries is simply inexhaustible. The material is all there in sufficient quantities to supply our wants for a hundred years. It only awaits the hand of man to gather it. It does not lie hidden in the bowels of the earth. It is visible to the eye, and covers regions thousands of miles in extent.

When we read of the present crude mode of obtaining the milk from the tree, and the slow and primitive way of curing it, it would seem as if a little Yankee ingenuity could readily increase the production sufficient to meet our requirements. The recent trip of Commodore Benedict up the Amazon only confirms the reports of other travelers that the rubber is now gathered in a most crude and unsystematic manner.

Statistics show that during the past twenty years even under existing conditions the production of rubber has largely increased, although during the past three years the product of Pará grades has remained substantially stationary.

While the Pará, or *Hevea* rubber, constitutes the permanent and reliable sources of supply, the augmented demand of recent years has been met by two other kinds of gum, known as the "Caucho" of the Amazon, and the products of the Congo, or African rubber. These latter gums are obtained by cutting down and destroying the trees and vines. This system of gathering rubber can only end in the final exhaustion of the supply. Caucho is found only in the interior, and on lands which are not inundated, and it is gathered almost exclusively by Indian labor. Although showing considerable increase of late years, these sources of supply are quite uncertain, and, apparently, not lasting.

It is to the Pará of the mighty Amazon valley that we must look for the permanent solution of the crude rubber problem. That valley is capable of yielding quantities of the best gum in the world for the next fifty years, equal to two or three times the present demand, if the labor can be had, and improved methods devised, to obtain it.

"Pará" is the only species of rubber that can be economically and successfully gathered by tapping the trees without injuring their vitality and productiveness. For the past 50 years this rubber has been taken by this process from the same trees on the banks and inlands of the Amazon.

As an occupation for industrious natives and acclimated foreigners, it has been truly said that this field offers a higher remuneration for unskilled labor than any other industry in the world. This rubber tree always grows in groups. The labor involved in tapping 150 to 200 trees a day is less than the work of cutting down and extracting the milk from a single tree. Again, these trees grow near the banks of navigable streams, thereby affording economical and convenient facilities for transportation. Further, they can be tapped almost daily and continuously from year to year.

It would seem as though we must look to Pará rubber as the ultimate source of the world's supply. Within a period of twenty years it has grown from an output of 8000 tons to 30,000 tons. Pará rubber is adapted to sustain almost any demand, if the vast forests in which these trees abound are opened up, taken care of, and properly worked.

By systematic development and effort the production of Pará rubber can be established upon a permanent basis, which will give it a position among raw materials practically as reliable as cotton or corn.

The prodigality of nature has stored away under the burning sun of the equator an abundant supply of crude rubber. The inaccessibility of the country, the intense heat, the quality of labor, the questions of supplies and transportation, are the obstacles

which must be encountered and overcome in order to solve the rubber problem. But these obstacles are not insurmountable. England has met and overcome similar obstacles in India and in South Africa. The Anglo-Saxon race has never permitted natural barriers to stand in the way of its commercial and industrial advancement.

There is no danger of an immediate cessation of the supply of crude rubber. We are looking simply to the not distant future, with a full realization of the possible peril that exists. We all realize that it will take time, energy, and capital to accomplish satisfactory results. Crude rubber has now become almost as valuable as some of the precious metals. As no obstructions of nature have ever long impeded the development of gold or silver or copper mines, so we believe that American courage, and energy and perseverance will solve the rubber problem before the danger point is reached.

Our whole history from the landing of the Pilgrims on the Atlantic coast until we entered the Golden Gate of the Pacific has been one long struggle with nature's barriers. But nothing could stem our progress or dampen the ardor of the American spirit. The same fearless energy and undaunted heroism which has subdued a continent and made it the home of civilization and freedom can conquer and utilize for the comfort and health of mankind the vast forests of the Amazon.

It is this American spirit which has made us what we are to day. It is this spirit which has hitherto defied the trackless wilderness, the swamp, the desert, the mountain and the prairie. It is this spirit which has built our magnificent cities, spanned the territory between the oceans with railways, made the flinty rock yield up its hidden treasures, and covered the land with rich harvests of grain and fruit.

It is this spirit which animated the early pioneers in their long, dreary march over thousands of miles of desert and mountain to the gold fields of California. It is this spirit which has surmounted the impenetrable fastnesses of the Klondike, locked in perpetual snow, to obtain the most precious of metals.

It is this spirit which will build the Panama canal under the same climatic and other adverse conditions that prevail on the Amazon. It is this spirit which filled the intrepid soul of Goodyear, who, during the ten years of hardship, suffering and want, in jail and out, using even the few tea cups he had for experimental purposes, continuing his struggle until his dream of vulcanization had become a reality.

It is this spirit which has conceived and organized our vast industries upon plans so comprehensive, and of such magnitude, as to arouse the amazement of other nations. It is this spirit which is pouring into our lap the largest share of the commerce of the civilized world.

It is by the exercise of this spirit that the difficulties which now confront us respecting the supply of crude rubber will vanish, and its production be placed upon foundations of such security and permanency as will not only meet the increased demand, but will also ensure to the rubber industry that measure of prosperity commensurate with the benefits and blessings it confers upon mankind. It is this spirit that inspired the lines of the poet:

"Rift the hills, and roll the waters,  
Flash the lightnings, weigh the sun—"

#### MR. PHELPS INTRODUCED.

#### THE Chairman said:

Among the invited guests this evening, I am pleased to see that we have with us a gentleman from Chicago who has accomplished what we are all striving for, and that is, the accumulation of a satisfactory quantity of the almighty dollar, and has retired from active business. He was a large and successful jobber of leather and rubber boots and shoes, and, therefore, undoubtedly retains some interest in the object for which our Club is organized. His reputation as a business man has preceded him, and I feel safe in

assuming that, as a citizen of Chicago he can bring us a message from the West which will be welcome. On a similar occasion while in his city he called upon me for a speech in the most unexpected and heartless way, and so I have no hesitancy in availing myself of the first opportunity for retaliation.

I call upon Mr. Erskine M. Phelps, of Chicago.

Mr. Phelps, coming as he said from the city by the "inland sea," spoke a word of graceful eulogy of his long time friend the late Hon. Elisha S. Converse, another to the Club, and sat down. Ex-Secretary Long, turning to him and mentioning the extreme brevity of the speech, said: "It's the best one to-night."

### INDIA-RUBBER GOODS IN COMMERCE.

#### EXPORTS FROM THE UNITED STATES.

OFFICIAL statement of values of exports of manufactures of India-rubber and Gutta-percha, for December, 1904, and for the twelve months of five calendar years:

MONTHS.	Belting, Packing, and Hose.	Boots and Shoes.	All other Rubber.	TOTAL.
December, 1904....	\$ 81,305	\$127,742	\$ 191,766	\$ 400,813
January-November..	808,771	1,099,030	2,149,273	4,057,074
Total, 1904 ..	\$890,076	\$1,226,772	\$2,341,039	\$4,457,887
Total, 1903....	857,634	991,351	2,511,980	4,360,965
Total, 1902....	738,257	1,065,592	2,011,905	3,815,754
Total, 1901..	608,116	974,018	1,743,882	3,326,616
Total, 1900 ...	528,382	721,085	1,559,049	2,808,516

#### COMPARISON OF RETURNS FOR THE LAST TWO YEARS.

Gain in Belting, packing, and hose.....	\$ 32,442	
Gain in Boots and Shoes.....	235,421	\$277,863
Loss in all other.....		170,941
Net gain for 1904 .....		\$ 96,922

#### Number of pairs of rubber boots and shoes exported:

In 1899 .....	621,069	In 1902... ..	2,377,743
In 1900.....	1,399,285	In 1903.....	2,170,172
In 1901.....	2,408,776	In 1904.....	2,391,806

#### SHIPMENTS TO NON CONTIGUOUS TERRITORIES.

DESTINATION.	Belting, Packing, and Hose.	Boots and Shoes.	All other Rubber.	TOTALS.
<i>Alaska</i>				
1903.. ..	\$32,351	\$ 35,331	\$17,448	\$85,130
1904 .. ..	44,393	130,552	19,337	194,282
<i>Hawaii:</i>				
1903.....	\$37,322	\$ 7,386	\$30,169	\$74,877
1904.....	29,439	12,006	34,089	75,534
<i>Porto Rico:</i>				
1903.....	\$8,545	\$811	\$16,074	\$25,430
1904.....	8,776	269	16,814	25,859
<i>Philippines:</i>				
1903.....	\$23,044	\$ 2,576	\$35,201	\$60,881
1904.....	31,653	7,684	42,809	82,146
<i>Total:</i>				
1903.....	\$101,262	\$ 99,104	\$ 98,752	\$299,118
1904 .....	114,231	150,541	113,049	377,821

#### IMPORTS INTO THE UNITED STATES.

India-rubber goods... ..	\$562,997	\$682,982	\$1,003,167
Gutta-percha goods.....	121,123	442,580	123,330
Total.....	\$684,120	\$1,125,562	\$1,126,497
Reexports.....	4,655	8,624	10,077
Net Imports.....	\$679,465	\$1,116,938	\$1,115,220

CANADA.—The rate of import duty on automobiles has been increased from 25 to 35 per cent. *ad valorem*. The same rate applies to automobile tires.



## THE DEATH OF A. H. YEOMANS.

ALMERON HART YEOMANS died suddenly of heart failure at 4 o'clock, on the morning of February 22, near Richmond, Virginia, while on a train, returning from a visit which he had made to the South, in the company of his wife, in what proved a vain effort to benefit his health. Funeral services were held at No. 39 Abbottsford road, Brookline, Mass-



ALMERON HART YEOMANS.

achusetts, which for years had been their home, on Sunday afternoon, February 26. The services were conducted by the Rev. Mr. Ryder, pastor of the Universalist Church in Malden, with which Mr. Yeomans had formerly been associated. According to his written request, found after his death, his body was cremated at the Forest Hill Cemetery, and his ashes sent back to his old home in Ohio.

The subject of this sketch, and of the accompanying portrait, had entered upon his seventieth year on February 5, though nothing in his appearance or in his attention to affairs would have suggested that he had finished the scriptural allotment of "threescore years and ten." He was a native of the village of Kinsman, in northeastern Ohio, whence he removed, in his sixteenth year, to New York city, with a view to beginning a business career with an uncle. Before very long, however, he went to Michigan, where he taught school for a short time. Later he went to New England, making his home with relatives at Portland, Maine, and holding a position for several years as purser on a steamer plying between Boston and St. John (New Brunswick). During the civil war he was on one of the government transport boats. He next became connected with the Haywardville Rubber Co., located near Malden, Massachusetts, and occupying the "Red Mills," which had figured at an earlier date in the life history of the Hon. Elisha S. Converse. Here he acted in the general capacity, having supervision of all departments of the business, until 1872, when the company ceased to exist.

A story that is typical of Mr. Yeomans's manner of putting things in an original and humorous way is told by one who was intimate with him at that time. When the "Red Mills" property was finally sold under the hammer, Mr. Yeomans was the auctioneer, and he did his work well. After the last parcel had been sold, he paused, and with a twinkle in his eye said:

"That is all, gentlemen, with one exception—my services. I am now free and my services are here put up at auction." Then in an aside: "If some rubber man present does not employ me I shall have to start a rubber factory of my own." Mr. Converse who was present, said quietly: "Come and see me to-morrow." The appointment was kept, and resulted not only in a close business alliance but in a firm friendship which lasted so long as both of the men were alive. The value of Mr. Yeomans's

services was apparent from the first, but certain it is that, after a memorable fire at the Malden factory of the Boston Rubber Shoe Co., the prompt and judicious assistance given by Mr. Yeomans in the way of finding building materials for a new structure commended him to Mr. Converse even more favorably than before. And this reference recalls the fact that on the occasion of a later great fire in Boston, Mr. Yeomans was again of eminent service, when he perceived the danger in time and assisted Mr. Converse to remove the company's books from the doomed office to a place of safety.

Mr. Yeomans acted at first as purchasing agent for all of the supplies used by the Boston Rubber Shoe Co., except crude rubber, which was bought by Mr. Converse himself, but after a few years this department was placed in his hands also. After their incorporation with the United States Rubber Co. Mr. Yeomans assumed a like position with the larger company, where the purchases, which had previously been made by the executive committee, ran into millions of money every year. In 1904 he became general manager of the General Rubber Co. (New York), which is practically the buying agency of the United States company.

For many years Mr. Yeomans was a neighbor of Mr. Converse in Malden, where he served as an alderman under the first city government, Mr. Converse being mayor. Later he resided in Brookline, Massachusetts, where he had a beautiful home, of which he was very fond, and which he retained after his transfer to New York compelled him to maintain a residence in that city. His ability was unquestioned; his integrity was unswerving; and his character and disposition in general such as to win for him the personal esteem of all who were brought within the sphere of his acquaintance.

## PITT BARROWS.

PITT BARROWS died at his home at Spring Hill, in the town of Mansfield, Tolland county, Connecticut, on January 17. Mr. Barrows was born in Mansfield, May 24, 1843; at the age of 20 years he became employed as a buyer of provisions for the Union army with headquarters at Baltimore, Maryland; after the civil war he was interested for several years in the manufacture of turpentine at Newbern, North Carolina; he was later associated with General B. F. Butler and General Sanborn in the settlement of United States tax cases, as an expert accountant, in which connection his work is said to have saved the government several millions of dollars. During the last 14 years of his life Mr. Barrows was selling agent of The Bloomingdale Soft Rubber Works (Paterson, New Jersey), in which, as in all his other business relations, he proved most efficient and endeared himself to all with whom he came in contact. Mr. Barrows was at one time a resident of New York city, but about 25 years ago he returned to Mansfield and thereafter lived in the house built by his father. Mr. Barrows was a Democrat in politics, and his popularity in his native town was proved by his being the first Democratic town clerk ever elected there. He at various times filled other town offices. While not an enlisted man in the army during the civil war, Mr. Barrows was called "Captain" by his intimates, and always retained the friendships formed during the war.

The funeral was held on January 20, in the Congregational church at Willimantic, Connecticut, the services being conducted by the Rev. Thomas Edward Potterton, of the Church of Our Father, Brooklyn, assisted by the Rev. Ashley D. Leavitt, pastor of the Willimantic church. The remains were placed in the receiving vault in the Willimantic cemetery, to be interred later in New York. Mr. Barrows was married about 29 years ago to Miss Bessie Garland Van Duzer, of New York city, who survives him.

## NEWS OF THE AMERICAN RUBBER TRADE.

## SEAMLESS RUBBER CO.—INCREASE OF CAPITAL.

THE Seamless Rubber Co. (New Haven) on February 2 filed with the secretary of state of Connecticut a certificate of increase of capital stock from \$250,000 to \$300,000. General Manager E. E. Menger advises THE INDIA RUBBER WORLD: "This was done in order to provide funds for an increase in our machinery and equipment. All of the above stock was subscribed for by the present holders. We take pleasure in advising you that, owing to our constantly increasing business, we were compelled, in order to keep up with the demands of our customers, to provide for the additional equipment." The last previous increase in capital stock was made in June, 1903, when it was raised to \$250,000.

## THE EUREKA FIRE HOSE CO. IN THE SOUTH.

MR. WARWICK H. PAYNE, who for several years has been manager of the southern department of The Eureka Fire Hose Co. (New York), with headquarters at 704 Century building, Atlanta, Georgia, has been placed in exclusive charge of their sales in North Carolina, South Carolina, and Virginia. Mr. Payne will be assisted by Mr. H. H. Alvis, who will be located at some convenient point in Virginia and give his sole attention to that state, and by Mr. Charles B. Payne, with headquarters in Atlanta, and giving attention to the southern part of the territory. The Eureka Fire Hose Co. ask that their friends in the south communicate direct with the Atlanta headquarters, and suggest that information as to contemplated purchases be wired at their expense.

## COLONIAL TIRE AND RUBBER CO.

THE annual meeting of shareholders of the Colonial Tire and Rubber Co. was held at Akron, Ohio, on January 30. The directors were reelected: John Byrider, James A. Swinehart, P. D. Hall, and William A. Byrider—all of Akron—and John Hopper, of Wilmington, Delaware. The officers were then reelected:

*President*—JOHN BYRIDER.

*Vice President*—JAMES A. SWINEHART.

*Secretary and Treasurer*—P. D. HALL.

This is a Delaware corporation, dating from 1902, formed to control the European rights under the patents granted in 1901 to Swinehart and W. A. Byrider for the solid rubber tire marketed in the United States as the "Firestone" tire. This tire is made under license in several European countries, being known on the Continent as the "Byrider and Swinehart" tire.

## ASSIGNMENT OF THE DAYTON RUBBER CO.

A DEED of assignment was filed in the probate court at Dayton, Ohio, on the afternoon of January 28, by Oscar F. Davieson, as president and attorney for the Dayton Rubber Co., conveying all the property of the company to Nathaniel P. Ramsey and Claude C. Hooven. Mr. Davieson stated that the liabilities of the company were about \$20,000 and the assets upward of \$50,000. The company was incorporated in Ohio, December 9, 1903, with \$250,000 capital authorized, to manufacture mechanical rubber goods, and the work of installing a plant was at once begun. A report has been current for some time that the organizers of the company had failed to secure the expected capital, which report is confirmed by the fact that suits were filed recently against Harrie N. Reynolds, Frank M. Andrews, and Eugene J. Barney, for sums aggregating \$15,400, and alleged to be due on account of unpaid subscriptions to the cap-

ital stock of the company. The assignees named were among the incorporators of the company, and Mr. Ramsey has since been vice president and Mr. Hooven secretary.

## NEW WAREHOUSE OF THE UNITED STATES RUBBER CO.

THE United States Rubber Co. and the Boston Rubber Shoe Co. have moved their New York city warehouse from No. 9 Murray street, where they have been located for the last seven years, to a brand new building at No. 60 Thomas street, which these companies will occupy exclusively. The building consists of a basement and six floors, and has a floor area of about 14,000 square feet. This warehouse, like that in Murray street, will be under the charge of Mr. E. L. Phipps, selling agent of the Boston Rubber Shoe Co., assisted by Mr. J. C. Rockwell. Their office is on the ground floor, with the shipping department in the rear. The second, third, and fourth floors will be devoted to "Boston" and "Bay State" goods, and the fourth, fifth, and sixth floors to "Woonsocket," "Rhode Island," and other brands. Mr. Phipps has vastly better facilities than he had in Murray street, for by using the entire building, he has exclusive control of the elevator service. He expects to be able to take in or ship 1000 cases a day.

## STANDARD UNDERGROUND CABLE CO. (PITTSBURGH).

THE annual report presented at the shareholders' meeting, on January 24, showed gross business for 1904 of \$8,571,553. The gross business for the preceding year was \$9,192,618. The report points out that more or less depression existed in business generally, resulting in keener competition and lower prices, but that there was practically no diminution in the volume of business transacted by the company. The unfilled orders on hand on December 31 aggregated over \$1,000,000. The company have no outstanding notes, mortgages, bonds, or preferred stock, and no contingent liability on customers' notes. Out of the net earnings of the year the usual dividend of 12 per cent. was paid, aggregating \$240,000, and the remainder of the earnings added to the surplus account. The capital of the company is \$2,000,000. The directors were reelected, as follows: Mark W. Watson (president), Joseph W. Marsh (vice president and general manager), James H. Willock, John Moorhead, Jr., John B. Jackson, B. F. Jones, Jr., Robert Pitcairn, J. N. Davidson, and William A. Conner.

## THE HARTFORD RUBBER WORKS CO.

THE Hartford *Globe* (February 12) reports the local factories of this company to be giving employment to about 700 workers, with a weekly pay roll of more than \$10,000. During the week then last closed more than 30 tons of rubber were used. The daily output of bicycle tires was about 5000, in addition to vehicle tires. Important shipments of rubber mats to Japan and Russia were mentioned.

## CONTINENTAL RUBBER CO. (JERSEY CITY).

THE Continental Rubber Co., on January 27, 1905, filed with the secretary of state of New Jersey a certificate decreasing its capital stock and creating one class of stock—preferred. The company was incorporated May 13, 1903, as the American Rubber Co., with \$100,000 capital authorized. June 29, 1903, the name was changed to the Continental Rubber Co., and a certificate filed referring to an increase of capital to \$1,000,000, of which amount there had been issued, to November 29, 1904—the date of the last annual report—\$250,000. The latest change



was to reduce the authorized capital to \$562,500. The object of the company, which has an office at No. 32 Broadway, New York, may be inferred from the fact that the several patents issued to William A. Lawrence, for the extraction of gum from the Mexican "Guayule" plant, have been assigned to it. The Continental-Mexican Rubber Co., incorporated October 14, 1904, under New Jersey laws, with \$100,000 capital authorized, is understood to be a subsidiary concern, formed to care for the interests in Mexico of the parent company.

MR. A. M. STICKNEY.

THE subject of this sketch was born in Lowell, Massachusetts, in 1847. He was the son of Jonathan Gage Stickney, a noted American inventor, who was one of the pioneers in rubber manufacturing in Belgium, at Menin. It happened, therefore, that young Stickney was educated abroad, his schooling being in London and Menin. At the time of his graduation in the latter city he was notable by being the youngest boy by five years that had ever graduated there, and the school authorities recognized it by presenting him with a gold medal and wreath. When only 16 years old he enlisted in the Pennsylvania volunteer cavalry, and served in the Union armies until the end of the war. Later he joined the navy and cruised in the Mediterranean for about a year, when he returned to the United States.



His interest in the rubber business began when he took hold of what was known as the Wellman sole cutting machine, up to that time a complicated failure, and made of it one of the most ingenious and successful machines that the rubber trade is possessed of. These machines, by the way, are used in rubber shoe factories the world over, and in installing them Mr. Stickney has

visited Russia, Germany, Sweden, France, Great Britain, and other European countries, where he is very much at home as he speaks French, German, and Russian fluently. It is interesting to note that as this sketch appears Mr. Stickney lands in Europe for a four months' stay, during which he will visit all of the countries named, together with Finland and Italy. Mr. Stickney has always kept up his interest in the Grand Army, having been commander of Post 66, G. A. R., of Medford, Mass., for some four years. His residence is in Medford, where is the factory of the Wellman Sole Cutting Machine Co., and where much expert work is done in special machines for the rubber trade.

#### A NEW ATLANTIC CABLE.

ANOTHER Atlantic cable is to be laid by the Commercial Cable Co. (New York), and the matter has been advanced so far that bids for the cable and its placing have already been received. The route has been determined and it is expected that the cable will be in operation during the coming summer. President Clarence H. Mackay stated recently that no new stock would be issued on this cable, but that the cost had been

met by the Mackay companies because of a desire to keep the reserve fund of the Commercial Cable Co. intact. Mr. Mackay added that the first report of the affiliated Mackay companies to the shareholders would be made very shortly. The new cable will be of high speed and will embody the latest discoveries in this branch of electrical work, which is an intimation that a liberal amount of Gutta-percha will be required. The Commercial Cable Co.'s system already embraces three transatlantic lines, of an average length of 2298 nautical miles, the total mileage, including connections, being 13,212. The same interests control the Commercial Pacific Cable Co., now operating a cable across the Pacific, with a length of over 7000 nautical miles.

#### PEERLESS MUTUAL AID ASSOCIATION'S RECEPTION.

MORE than 400 employes of the Peerless Rubber Manufacturing Co. and guests spent an enjoyable evening at Nungesser's Hall (North Bergen, New Jersey), on the evening of January 28, the occasion being a reception given by the Peerless Mutual Aid Association. Mr. Edward Busch, president of the association, presided at the supper table, and conveyed to the members the regrets of Superintendent R. B. Meany at being unable to attend. Mr. Archie Doyle responded to the toast "The Peerless," and was followed by a number of other speakers. The association was organized February 9, 1895, has a good sized fund in the treasury, and has made a liberal distribution of money in cases of sickness and death. In addition the association arranges during each year for several social events which are well attended and invitations to which are eagerly sought for. The officers are: Edward Busch, president; James Mul-lane, vice president; George Merritt, financial secretary; A. J. Everson, recording secretary; Louis Buechner, treasurer; George Everson, sergeant at arms; Fred Smith, David Danielson, and George Iler, trustees.

#### NEW YORK STOCK EXCHANGE TRANSACTIONS.

##### UNITED STATES Rubber Co.:

DATES.	COMMON.			PREFERRED.		
	Sales.	High.	Low.	Sales.	High.	Low.
Week ending Jan. 21	8,100	38	36	3,860	100 <sup>7</sup> / <sub>8</sub>	100
Week ending Jan. 28	8,900	37 <sup>1</sup> / <sub>8</sub>	34	3,400	100 <sup>7</sup> / <sub>8</sub>	98 <sup>1</sup> / <sub>2</sub>
Week ending Feb. 4	3,600	37 <sup>1</sup> / <sub>2</sub>	36 <sup>1</sup> / <sub>4</sub>	1,350	100 <sup>3</sup> / <sub>4</sub>	100
Week ending Feb. 11	20,850	39 <sup>1</sup> / <sub>2</sub>	36 <sup>1</sup> / <sub>4</sub>	10,814	109 <sup>1</sup> / <sub>4</sub>	100 <sup>1</sup> / <sub>2</sub>
Week ending Feb. 18	32,450	44	39 <sup>1</sup> / <sub>4</sub>	16,400	115	108 <sup>7</sup> / <sub>8</sub>
Week ending Feb. 25	16,225	44 <sup>1</sup> / <sub>4</sub>	41 <sup>3</sup> / <sub>4</sub>	3,400	114 <sup>5</sup> / <sub>8</sub>	112 <sup>1</sup> / <sub>4</sub>

##### RUBBER Goods Manufacturing Co.:

DATES.	COMMON.			PREFERRED.		
	Sales.	High.	Low.	Sales.	High.	Low.
Week ending Jan. 21	2,900	27 <sup>7</sup> / <sub>8</sub>	26 <sup>3</sup> / <sub>4</sub>	100	95 <sup>1</sup> / <sub>2</sub>	95 <sup>1</sup> / <sub>2</sub>
Week ending Jan. 28	3,650	27 <sup>1</sup> / <sub>4</sub>	25 <sup>1</sup> / <sub>8</sub>	800	95 <sup>1</sup> / <sub>2</sub>	94
Week ending Feb. 4	2,000	27 <sup>1</sup> / <sub>8</sub>	25 <sup>3</sup> / <sub>4</sub>	100	94	94
Week ending Feb. 11	8,400	27 <sup>1</sup> / <sub>8</sub>	25 <sup>1</sup> / <sub>4</sub>	500	96 <sup>3</sup> / <sub>4</sub>	95 <sup>1</sup> / <sub>2</sub>
Week ending Feb. 18	11,000	27 <sup>1</sup> / <sub>4</sub>	25	220	97	97
Week ending Feb. 25	4,700	27	26	1,400	95 <sup>1</sup> / <sub>8</sub>	96 <sup>1</sup> / <sub>8</sub>

#### DRAWBACK ON AUTOMOBILE TIRES.

THE United States treasury department announces that on the exportation of automobiles manufactured by The Locomobile Co. of America (Bridgeport, Connecticut), with the use of imported tires, a drawback will be allowed equal in amount to the duty paid on the imported tires, less the legal deduction of 1 per cent. In response to an inquiry the Locomobile company advise THE INDIA RUBBER WORLD: "Occasionally we have a request from a customer to equip his car with Michelin or Continental tires; these, by the way, being the two best foreign tires. Of course, we are perfectly willing to put these on at additional cost and have done so in a number of cases."

Their regular equipment, however, embraces American-made tires.

#### MASSACHUSETTS MANUFACTURERS AND THE TARIFF.

GOVERNOR DOUGLAS, of Massachusetts, having recommended in his inaugural address certain action by the general court in respect to recommending action by the United States congress in the revision of the tariff and in the direction of reciprocity with Canada, numerous petitions have been presented to the general court by manufacturing interests in the state, protesting against any such action, on the ground that the consideration of such matters should be left to the congress. Among the signatures to such petitions are the Glendale Elastic Fabrics Co., Nashawannuck Manufacturing Co., George S. Colton, and the Easthampton Rubber Thread Co., all of Easthampton, Mass.

#### NATIONAL CEMENT AND RUBBER MANUFACTURING CO.

THE company above named have practically completed negotiations with Harvey Frost & Co., of England, whereby they will manufacture at their plant at Toledo, Ohio, and put upon the American market a new vulcanizer for automobile tires, for which a patent was granted recently to J. Harvey Frost. Mr. Frost, by the way, came to America to conduct the negotiations referred to. The National company were pioneers in the sale of vulcanizers for repairing bicycle tires, and with their experience in handling vulcanizers they feel disposed to give prominence to the new device mentioned here. The National company have been increasing their line of supplies adapted to work on automobile tires, besides which they have begun the sale of electric tape.

#### THE MITZEL RUBBER CO. (CARROLLTON, OHIO).

THE removal of the factory of this company from Akron was reported in this Journal in September last. The company have been very successful in their new location. For some time past they have been obliged to run their factory night and day, to keep pace with the extension of their business, which has involved the opening of a number of desirable new accounts. They are making a considerable line of druggists' sundries, besides dipped and molded goods in other lines. The factory now has its own electric lighting plant and fire protection service, in addition to the protection which they have from the city. The officers remain as last reported in these pages: H. F. Mitzel, president and treasurer; R. A. Mitzel, vice president; G. N. Eby, secretary. There have been some additions to the board of directors, however, with the result of strengthening the company, and enabling it to take care of an increased business. The capital has been increased from \$100,000 to \$125,000. The board now consists of the officers already named: L. D. Stockton, president of the Carrollton Savings and Banking Co.; J. R. Williams, M. D.; W. L. Handley, attorney; E. L. Henderson, manager of the Carrollton Pottery; C. W. Mitzel, and A. E. Mitzel. The erection of another building, 40 X 100 feet, is planned for the spring.

#### NEW INCORPORATIONS.

GLASKIN-COMSTOCK CO., January 17, 1905, under Minnesota laws; capital, \$50,000. Object, to deal in India-rubber and leather goods and mill supplies, at Duluth, Minnesota. The shareholders, directors, and officers are: Thomas H. Glaskin, president; Byron G. Segog, vice president; John W. Comstock, secretary and treasurer. Mr. Glaskin was recently vice president of Thomson-Glaskin Co. (Duluth), after having been for several years the Duluth representative of the W. S. Nott Co., an important rubber jobbing house in Minneapolis.

=Vacuum Cleaner Co., February 1, 1905, under New Jersey laws; to make and deal in vacuum sweeping apparatus; capi-

tal, \$1,000,000. Incorporators: David T. Kenney (patentee of the system) and William G. Besler, Plainfield, New Jersey, Harry B. Hollins, Robert W. De Forest, Thomas Ewing, Jr., and William K. Vanderbilt, Jr., New York city. Registered office: North Plainfield, New Jersey; principal office, Nos. 72-74 Trinity place, New York. Mr. Kenney, who formerly carried on the business under his own name, has been elected president of the corporation.

=Le Marquis Tire Co. (New York city), February 3, 1905, under New York laws, to act as American selling agents for the "Le Marquis" motor tires, made in France by Dufour Jr. & Son; capital \$25,000. Incorporators: Charles I. Scott, No. 32 West 33d street, (114 shares); Arthur C. Brady (15 shares); Henry Nicot (1 share). Mr. Scott has been elected president, and the office of the company will be at his address, as given above. Arthur C. Brady is secretary and treasurer. Thomas T. Baylor, No. 37 Liberty street, New York, is attorney for the company.

=The incorporation is reported in Canada, at the end of January, of The Commercial Rubber Co., Limited, at Montreal, with \$20,000 capital, "to manufacture rubbers, rubber boots, etc." The provisional directors include R. D. McGibbon, Douglas Armour, and K. J. Beardwood, all of Montreal, Mr. K. J. Beardwood being named as secretary. Messrs. McGibbon and Armour are included in the law firm of McGibbon, Casgrain, Mitchell & Surveyer (Montreal), who advise THE INDIA RUBBER WORLD that they are not yet at liberty to supply information for publication regarding the new company.

=The secretary of state for Illinois on January 13, 1905, issued a license to A. M. Jones, E. S. Jones, and Eugene L'Hote to open books of subscription to the capital stock of the Milford Rubber Works, the amount of capital named being \$50,000. It was stated at the office of the secretary of state on February 20 that no report had been received of the completion of the organization of the company; the postoffice addresses of the incorporators were not known at that office.

#### TRADE NEWS NOTES.

WILLIAM F. STEARNS has become connected with the New York Rubber Co. as head of their mechanical goods department at the factory at Matteawan, New York.

=Mr. M. Wachter, well known in the United States as a factory superintendent in insulated wire work, has accepted a position with the Yokohama Insulated Wire Co. (Yokohama, Japan), and is now on his way to his new post.

=Fred C. Vanderhoof, who has been appointed manager of the Buffalo (New York) branch of The Fisk Rubber Co., was recently connected with the Standard Spoke and Nipple Co., and is widely known in the tire purchasing trade.

=C. J. Bailey & Co. (Boston) have issued a revised price list of their rubber brushes and the other popular Bailey patented specialties.

=Frank M. Krapp, referee in bankruptcy in the matter of the Victor Rubber Co. (Springfield, Ohio), in bankruptcy, in the United States district court in the southern district of Ohio, has given notice of a first dividend of 8 per cent. upon all claims proved and allowed, the same to be paid within 5 days from March 1.

=Mr. Robert E. Hotchkiss, for several years superintendent of the shoe department of the factory of the Liverpool Rubber Co., Limited, is reported to have gone to St. Petersburg in a similar capacity, with the Russian-American India-Rubber Co. Mr. Hotchkiss was factory superintendent of the Boston Rubber Co. while that company was in existence. His father, the late Burritt M. Hotchkiss, was connected with the rubber industry at Naugatuck, Connecticut, for 47 years.



=The Amazon River Wireless Telegraph Co., whose offices are at No. 17 Battery place, New York, have been shipping additional material for the equipment of a system of communication between Pará and Manáos, the beginning of which was made by the establishment of two stations during the recent visit to the Amazon of Commodore E. C. Benedict and his party, on the yacht *Virginia*.

=Mr. Russel G. Colt, son of President Samuel P. Colt, of the United States Rubber Co., who was a member of Commodore Benedict's party on the recent cruise of the yacht *Virginia* to the Amazon, has become a member of the office force of the General Rubber Co., (New York), and, it is understood, will devote his attention hereafter to the crude rubber business.

THE selling department of The Beacon Falls Rubber Shoe Co. at the factory (Beacon Falls, Connecticut) and that at No. 106 Duane street, New York, have been consolidated. The headquarters will be at the latter address, the office being in charge of Mr. La Vete C. Warner, who has had charge hitherto of the salesmen who traveled from the mill. The New York business is conducted as a separate corporation, The Beacon Falls Rubber Shoe Co. of New York, of which Mr. Warner has been made treasurer, the president being Mr. Tracy S. Lewis.

=The Standard Underground Cable Co. (Pittsburgh) have established a selling office for the southwestern United States, at No. 521 Security building, St. Louis, in charge of Mr. E. J. Pietzker, who has been for some time past connected with the company's Chicago selling branch.

=Messrs. Earle Brothers, brokers (New York), favor us with their annual sheet of Rubber Statistics for 1904, showing monthly importations into the United States and Canada of the various grades, and the highest and lowest prices, on the same plan on which their reports have been based regularly since 1875.

=The Acker Process Co. (Niagara Falls, New York), are manufacturers on an important scale of Carbon Tetrachloride, a material of value to the rubber industry, and in relation to which an article appears elsewhere in THE INDIA RUBBER WORLD. The selling agents for this company are the General Chemical Co., with offices at No. 25 Broad street, New York, and in Philadelphia, Chicago, Pittsburgh, Cleveland, Syracuse, N. Y., and Buffalo, N. Y.

=Owing to a break in the machinery, the factory of the Lambertville Rubber Co. (Lambertville, New Jersey) was closed during the first week of February, although the company were unusually well supplied with orders.

=Messrs. Poel & Arnold (New York and Boston) have favored THE INDIA RUBBER WORLD with a table of the exports of India-rubber from Pará and Manáos during 1904, the list of exporters being headed by the related firms of Cmok, Schrader & Co. and Dusendschön & Co., whom Messrs. Poel & Arnold represent in the United States. The firms mentioned shipped 10,318,905 pounds to the United States and 11,200,988 pounds to Europe, or a total of 21,519,893 pounds out of a grand total of 67,558,062 shipped from the Amazon.

=The third annual masquerade ball of the I. B. Kleinert Benevolent Association, composed of employees of the I. B. Kleinert Rubber Co. (College Point, Long Island), held on Saturday evening, January 28, was largely attended.

=Suit has been filed against the Boston Woven Hose and Rubber Co. for \$20,000 damages, claimed by Margaret Hogan, who alleges that while taking rubber rings from a barrel, in the company's employ, her arm was injured by a projecting nail.

=The Pantasote Leather Co. (Passaic, New Jersey), engaged in the manufacture of an imitation leather known as "Pantasote," have begun proceedings to protect the trademark under

which their goods are advertised and sold. On February 17 a salesman employed in the department store of R. H. Macy & Co. (New York), was arraigned in a police court charged with selling a couch with a label designating its covering to be of "Pantasote." He gave bond for his appearance at the next term of the court of general sessions.

=Charles M. Loughhead was awarded a verdict for \$5000, by a jury at Akron, Ohio, on February 13, in his suit against the Goodyear Tire and Rubber Co. for \$15,000 damages, claimed for injuries sustained on account of a broken leg, on November 4, 1901, while working at a rubber tubing machine in the defendant's factory. He claimed that a clutch with which he attempted to stop the machine failed to work, and that his injury was the result.

=The Hohmann & Maurer Manufacturing Co. (Rochester, New York), manufacturers of special thermometers and pressure gages, whose goods are well known among rubber manufacturers, are erecting a large modern factory with some 60,000 feet of floor space, which they expect to have in working order not later than August or September of this year. While this will not of necessity improve the quality of "H. & M." goods, which are standard, it will enable the company better to take care of their largely increasing business.

=The Omaha (Nebraska) *Bee* reported, on February 12, on the rubber footwear trade: "The demand for rubber goods last week was exceptionally heavy for the time of year. Most of the orders were sent by express. The large number of these filling-in orders received last week shows conclusively that this long continued cold weather and snow has practically exhausted retailers' stocks so that the amount of goods carried over will be very small."

=A young man named McLeod was arrested at Buffalo, New York, on February 4, charged with attempting to obtain \$2800 worth of diamonds from a prominent New York jewelry firm by representing himself to be Edward R. Rice, a wholesale rubber goods dealer of Buffalo.

=The Fisk Rubber Co. (Chicopee Falls, Massachusetts) according to a late report were running their press and heating departments 24 hours a day, and other departments three nights a week until 9 o'clock, owing to having received orders largely in excess of any previous season.

=Nearly 600 appeals were made from the increased valuations on property made by the board of assessors at Bloomfield, New Jersey. Among the appeals was one of the Combination Rubber Manufacturing Co., who obtained a reduction of \$13,000 on the official valuation of their personal property.

=At the "Alice" mill of the Woonsocket Rubber Co. (Woonsocket, Rhode Island) the makers of arctics and lumberman's shoes have been working full time, and the production has been increased by 400 pairs per day.

=The plant of the Massillon Rubber Co. (Massillon, Ohio), erected two years ago and operated for a few months in the manufacture of a few specialties, has been purchased by George Rhine, of Massillon, who hopes to have it in operation shortly.

=Mr. John J. Nevin, of Jersey City, New Jersey, has been appointed general agent of The Bloomingdale Soft Rubber Works, (Paterson, New Jersey), manufactures of reclaimed and devulcanized rubber, to succeed the late Mr. Pitt Barrows, who has filled that position for 14 years.

=The Diamond Rubber Co. (Akron, Ohio), have lately made some good shipments to South America, one feature of interest of which is the inclusion of some belting of larger size than it has been usual to send to that part of the world. Also, good shipments to Australia.

=The annual meeting of the shareholders of the American Hard Rubber Co. was held at the office, No. 9 Mercer street, New York, on February 14.

=William R. Ray, chief engineer and master mechanic at the Melrose factory of the Boston Rubber Shoe Co., had an exciting experience after leaving the factory one evening early in February, and while on his way to his home in Malden. It was pay day, and he presumably had a substantial sum of money in his pocket. He was accosted by a man wearing a mask, who commanded him to hold his hands up, at the same time pointing a revolver in Mr. Ray's face. Instead of doing as he was told, Mr. Ray caught the masked man by the hand in which the revolver was clutched, and after a struggle of some minutes secured the weapon, after which the other fled in the darkness. Mr. Ray fired one shot at the retreating figure, but without effect so far as known.

=The Alling Rubber Co. (Bridgeport, Connecticut) have rented the store at No. 139 Bank street, Waterbury, where they will open about May 1 a retail rubber store. It is expected that Mr. W. C. Minor, who has been connected with the Alling company at Bridgeport for a number of years, will be in charge as manager. This will be the ninth rubber store in Connecticut operated by the Alling combination.

#### ADVANCE IN RUBBER FOOTWEAR.

ON February 8 the jobbers of rubber boots and shoes holding contracts with the United States Rubber Co. were notified as follows:

Because of the continued high price of crude rubber, on and after this day our prices are advanced as follows: First discount will be 20 per cent. instead of 25 per cent.; other discounts remain the same. Colonials and Tennis prices remain unchanged, but all discounts are subject to change without notice.

The changes have been figured out as equivalent to a net advance of  $6\frac{2}{3}$  per cent. over the prior prices in force. But the special discount of 5 per cent. offered at the beginning of the year on orders placed before April 1 will remain in effect until that date. The new discounts are printed herewith in bold face type, with the former rates printed underneath in ordinary type:

First quality (except Woonsocket and Meyer) . . . . .	20 @ 3%
	25 @ 3%
Woonsocket and Meyer brands . . . . .	20 @ 5 @ 3%
	25 @ 5 @ 3%
Second quality (except Rhode Island) . . . . .	20 @ 10 @ 3%
	25 @ 10 @ 3%
Rhode Island brand . . . . .	20 @ 10 @ 5 @ 3%
	25 @ 10 @ 5 @ 3%

United States Rubber shares had already gone to par; during the past month preferred stock has been quoted at 113 and higher. The unusually prolonged snow weather doubtless has had its effect, upon top of which comes the announcement of higher prices of products.

As for the dealers, it can hardly be said that the new prices have occasioned any surprise. There was cause for surprise rather, at the beginning of the year, when no advance was made. Coming at practically the middle of February the new prices cannot affect a great deal of the trade of the season now near an end. But in view of the fact that the latest prices are not guaranteed, and no reason exists for supposing that they will soon be lower, the trade may be expected to place orders early for next season, to escape another possible advance.

#### ACTION OF THE WESTERN JOBBERS.

IN view of reports current of the cutting of prices of rubber shoes, a special meeting of Chicago jobbers was called for February 2, by Mr. S. W. Campbell, secretary of the Western Association of Shoe Wholesalers, as a result of which ten members

of the association came together and signed a call for a general meeting, to be held at the Grand Pacific Hotel in Chicago, on February 8. By that date the United States Rubber Co. had announced an advance in prices, and it was felt by the members of the association who convened that this fact would tend largely to stiffen the market. It was unanimously resolved to adhere to the new schedule of discounts. The members of the association at once sent to all their customers a letter, of which the following is a copy:

DEAR SIR: At a joint meeting here of all handlers of rubbers, including United States and all outside rubber companies, have agreed under no circumstances or no conditions to sell the goods any different from United States Rubber Co. prices made to-day.

Now, we are put on honor in this matter and in such a way under no circumstances or conditions can we accept an order at less than the new prices made to day by the United States Rubber Co., which are 20, 5, and 3. [This includes the special 5 per cent. discount, to induce early orders, applicable to April 1.—THE EDITOR]

Now, if we cannot sell the goods this way we will not sell them at all. Now you will have no different prices to compete against, as we have all tied ourselves up stronger than ever before and no honorable business man will permit a salesman to do different. Now don't let your customers work you. We will send new prices on Combinations so that you will receive same at your Sunday address. Sign this letter and return to us at once. Any orders taken different than under these instructions will be refused by us at once.

Now, in this meeting to-day they claimed that there will be another advance of 5 per cent. on or before the first day of June, so your customers had better get in under the wet, as it may come at any time. Yours respectfully.

#### CANADA.

THE manufacturers of rubber footwear in the Dominion are expected to announce their lists about March 6. The lists and discounts probably will not vary widely from those in effect in the United States.

#### ANOTHER GOLF BALL SUIT.

A SUIT has been filed in the United States circuit court at New York, by Eleazar Kempshall, individually and as president of the Perfect Golf Ball Co., to restrain the Kempshall Manufacturing Co. from the manufacture of golf balls on the ground that the process used duplicates that by which the Kempshall ball is produced. The Kempshall Manufacturing Co. was organized to manufacture balls under patents granted to Mr. Kempshall. A suit for infringement of patents brought by the Haskell Golf Ball Co. was settled by an agreement under which the Kempshall company pay a royalty. Mr. Kempshall says:

"The new ball I am making is protected by patents which antedate those held by the Kempshall company, and were not taken out by me. The Haskell people, while establishing a priority of invention on golf balls packed with rubber thread, have not established the same claim regarding balls wound with a rubber band over a core, which is the gist of the Kempshall company's patents. Under the royalty agreement, the Kempshall company thought they could get along without my aid, and I have now gone into business on my own account. They are trying to stop me, but they won't succeed, for I am not using any of the patents that they own."

The Perfect Golf Ball Co. above referred to was incorporated recently under Maine laws with \$1,000,000 capital authorized. The offices are at No. 253 Broadway, New York.

#### [FROM OUR AK-ON CORRESPONDENT.]

THE report from Washington that the attorney general of the United States may be petitioned to fight the "golf ball trust" does not give much concern to the Haskell Golf Ball Co. "In the first place, there is no golf ball trust," said Mr.



B. G. Work, vice president of the company. "The only trust or monopoly that exists in connection with the manufacture of golf balls comes from the government itself, through the issue of the patent under which the rubber covered ball is manufactured. The Haskell Golf Ball Co. own this patent. No others own or control it. Four companies in the United States manufacture these balls, but they do it under a license issued by our company. There are no other manufacturers of golf balls in the United States. The four companies are The B. F. Goodrich Co., of Akron; A. G. Spalding & Brothers, of New York; Kempshall Manufacturing Co., of New York; and Worthington Manufacturing Co., of Elyria, Ohio."

An interesting question has arisen in connection with the report that the alleged golf ball combine might get into the courts. It is claimed that Associate Justice Harlan, of the United States supreme court, would be disqualified to sit in such a case, because he is one of the greatest players in the Chevy Chase Club, of Washington, where the complaint against the "trust" is claimed to have originated. That these members look upon golf balls as being as much of a necessity as meat, Mr. Work characterized as not being quite a fair comparison. "Meat is a necessity and golf balls a luxury; that's the only difference," said Mr. Work.

The reported complaint of the Chevy Chase and Columbia club members in Washington is that the price of golf balls is too high, and they believe this is on account of a combination, which Mr. Work denies. The players figure that "topping" balls at 50 cents a clip with cleek or midiron is too expensive, and with the many lost and destroyed in playing, the game is a costly one. The report that the price of some kinds of balls is to be raised to \$9 a dozen has further alarmed the players. It is a peculiar fact, however, that the first kick has come from among the very swellest and wealthiest players.

Mr. Work estimates that nearly \$1,500,000 per year is spent in this country for golf balls, using the retail price as the basis of figuring. It is estimated that there are 300,000 golf players in the United States. The life of a ball is about one game. Akron is the principal center of the golf ball industry, and during the busy season over 1000 dozen balls per day are turned out here.

#### THE B. F. GOODRICH CO. IN BOSTON.

THE Boston branch office of The B. F. Goodrich Co. (Akron, Ohio), has been removed to larger premises, at No. 161 Columbus avenue, where the company occupy the first floor and basement, with an aggregate floor space of about 10,000 square feet. They have the best facilities for repairing tires and taking care of their trade. They carry a full stock of tires and bicycle sundries, in addition to a full line of mechanical rubber goods of standard patterns.

#### GLOBE MILLS RUBBER CO.

THE installation of machinery by the new rubber shoe manufacturing concern by the above name at Lawrence, Massachusetts, already mentioned in these pages, continues to make progress. Loring M. Monk, who has been elected president and general manager of the company, was associated with W. L. Sage during the latter's connection with the rubber shoe jobbing trade in a large way in Boston. Leonard C. Moore, treasurer of the corporation, is president and treasurer of the L. C. Moore Co., proprietors of a large department store in Lawrence. Others interested are Charles M. Evans, of the retail boot and shoe trade, and Walter Coulson, a leading local lawyer. It is understood that Mr. Moore still holds title to the Globe worsted mills, transfers not yet having been made to the company, which has been incorporated under Maine laws.

#### A RUBBER FACTORY FOR CINCINNATI.

REPORTS received at the office of THE INDIA RUBBER WORLD during the last days of February refer to bright prospects for the success of negotiations to remove to Cincinnati, Ohio, a rubber manufacturing plant operated, for a number of years by an important concern in another city. Mr. W. G. Brown, who formerly was in Cincinnati in charge of a rubber store, and who is spoken of as the leader in the new negotiations, was in Cincinnati on February 25 and informed THE INDIA RUBBER WORLD correspondent there that he expected to be able to make some definite announcement by the latter part of the following week. It was understood that he had an option on a certain rubber manufacturing plant which would expire on March 31, but in the event of failure of negotiations the owners of the plant would continue its operation and make no further effort to dispose of it. Our Cincinnati correspondent wrote on the date mentioned: "He has interested a number of prominent financial men and capitalists in the project, and nearly all of the capital stock of the proposed company has been pledged. The new company, the name of which has not been decided upon, will be capitalized at \$375,000 divided into \$250,000 of 6 per cent. preferred and \$125,000 common stock. Among those largely interested in the project are five of the directors of the German National Bank, including George H. Bohrer, the president of the bank; Edward Herzog, M. Schwartz, Fred A. Geier, and William C. Wachter. Dr. J. M. Crawford, ex-United States consul at St. Petersburg, is also taking an active interest in the company. Nothing definite has been decided upon as to officials of the proposed corporation. It is certain, however, that Mr. Brown will be one of them, but he will be general manager. There is some talk of electing him president. This, however, he states will be for the stockholders to determine. The probabilities are that the plant will be located in Norwood, an extensive manufacturing suburb of this city. Mr. Brown has been viewing a five acre tract of land near The Smith & Nixon Piano Co., but holds no option on it. There are several other sites under consideration. It is proposed to erect a modern fireproof manufacturing plant and begin operations with about 200 employes."—The rubber manufacturing company referred to in the above paragraphs advised THE INDIA RUBBER WORLD on February 27 that they had no statement to make regarding the mention of their company in the connection referred to.

#### A MONTREAL FIRM BURNED OUT.

FIRE occurred on the forenoon of January 28, in the factory and warehouse of the National Rubber Co. of Canada, manufacturers of waterproof clothing, at No. 425 Craig street Montreal, the origin of which has not yet been explained. The fire started on the third floor of the four story building occupied by the company, and did not reach the two lower floors, though their contents were seriously damaged by water. Mr. P. Glickman, proprietor of the business, estimates the total damage at \$40,000. The amount of insurance involved is officially stated at \$32,000 on stock and fixtures, and \$6000 on the building. The company have taken temporary quarters at No. 521½ Craig street, and there has been no interruption of business.

#### PERSONAL MENTION.

MR. JAMES E. BAXTER, chairman of the Leyland and Birmingham Rubber Co., of England, was a recent visitor to the United States, for the first time. Mr. Baxter was accompanied by his brother in law, Mr. William Huck.

—Mr. Thomas G. Richards, superintendent of the Boston Woven Hose and Rubber Co., gave an interesting lecture on the evening of February 2, before the Y. M. C. A. at

Cambridge, Massachusetts, on "Methods of Controlling Production, Wages, and Waste." This was one of a series of lectures in factory economy, designed for superintendents and foremen.

=A lecture on the processes of manufacturing rubber goods was delivered by Mr. Andrew McTernan, superintendent of the Tyer Rubber Co., on the evening of January 21 before the Burns Club, a social and literary organization of Andover, Massachusetts.

=Mr. Ernest E. Buckleton, general manager of the North Western Rubber Co., Limited (Liverpool, England), paid a flying visit to the United States during February. He sailed from New York for home on the *Oceanic* on the 15th.

=Messrs. Charles Jung, general manager, and William Hausser, superintendent of factories, of the Société Industrielle des Téléphones (Paris and Calais, France), an important concern in the insulated wire industry, were visitors to the United States during the past month.

=Mr. Frederick S. Minott, of New York, and Mrs. Marion Lowry Michler were married at Florence, Italy, on February 11. Mr. Minott was attended by his brother, Joseph Otis Minott, of New York. Mrs. Minott is a daughter of the late Commodore Reigert B. Lowry, U. S. N., and is the widow of Colonel Francis Michler. Mr. Minott is the son of the late Joseph A. Minott, of South Orange, New Jersey, whom he succeeded as secretary of the Goodyear Rubber Co. (New York). He is a graduate of Princeton University, in the class of '89, and is a member of the University, Princeton, and Strollers' clubs, of New York, and the Rockaway Hunt Club. Mr. and Mrs. Minott will take an automobile trip through Europe before returning to the United States.

=Mr. William D. Owen, of the Ubero rubber plantation properties, was reported recently to be at Cairo, Egypt, on ac-

count of his health, with the date of his return to the United States uncertain.

=Laurence W. Ahrens, of the L. W. Ahrens Stationery and Printing Co. (New York), died on February 14, in his forty-second year. The company referred to for a number of years held contracts for supplying the municipal government departments with stationery, including rubber goods.

#### ELEAZAR BUTTIN' IN.

ELEAZAR (\*God-hath-helped) KEMPSHALL whose hundreds of golf ball patents, with their thousands of claims, were supposed to secure to the Kempshall Manufacturing Company, to whom they were assigned, any and all new ideas in their line, is out with his old company and also out with a new ball. He has with speed and dispatch organized another company, Maine laws, \$1,000,000 capital, and says he is working under patents not owned by the Kempshall company. That company say he is a doubly hyphenized infringer, and by the help of the court have temporarily enjoined him. One who knows the insides of golf balls as few others do, asserts that the new ball has for a center, a shoe button, upon which the resilient material for the ball itself is "moulded, pressed, wound, twisted, braided, knit, tied, stretched, stuck, cemented, pasted, glued, soldered, laid, placed, put, nailed, tacked, spiked, bolted, pegged, dropped, planted, rolled, squirted, jabbed, dabbed, hung, flung, photographed, or otherwise attached." And it is quite likely true. Shoe buttons, oyster crabs and seed warts are almost the only available centers not covered by the Kempshall company's patents. Eleazar is just the sort of genius to butt in with a button. Now, with a button hook driver, a shoe horn putter, and a nine hole course of button holes, what a game golf will be?

\*Literal interpretation of the name Eleazar.

## REVIEW OF THE CRUDE RUBBER MARKET.

THE upward tendency of values, which has been in progress for some time past, and received a new impulse about the 20th of the past month, has reached a point where we have to report higher prices for both Pará and medium sorts than have ever been recorded in these pages, with the exception of our report on December 1. This extreme figure reported at that time was 1.30 to 1.32 for new Upriver fine, compared with which we now report 1.28 to 1.29, with proportional figures for other Pará grades.

Advices received February 18 stated: "At present there is no stock at Manáos unsold, but a liberal quantity is soon to arrive there, for which there are waiting orders with all the exporters. The advance in values since February 1 was due to the necessities of the exporters at Manáos; that is, to secure an increased quantity for certain buyers it was necessary to advance the market." A Pará advice, dated February 11 said: "With the increase of receipts the tone of the market began to lose buoyancy, the demand showing sign of weakness and prices becoming easier, but a fresh revival has taken place which has brought all favorable features to the surface again, as evidence that, whatever the course of events may be later on, at present the larger receipts, far from being an incumbrance, are a welcome feature."

The arrivals of Pará at New York have been very large, but for the most part have been delivered on contracts, leaving moderate lots for sale. The total receipts at the mouth of the Amazon to date appear in excess of the arrivals at the corresponding date of several years past, but the increase has not

been sufficient to lend hope that the season's production as a whole will show an advance. There yet remain of the season only four months, and usually March is the last month to show large receipts. The continued activity of the consuming markets coupled with the small visible supplies makes it impossible to predict an early decline in prices.

Attention may be called to the fact that our quotations for African sorts this month are considerably higher than have been reported at any previous time. Several important grades of Africans are quoted at over \$1, and even Assams as high as 99 cents. Reference to the first issues of THE INDIA RUBBER WORLD, (in 1889) shows that Sierra Leones were quoted at 35 @ 44, Congo sorts at 39 @ 42, and Assams at 55, which figures, compared with those now prevailing, indicate a much more marked appreciation in the value of African sorts than of Pará, which is due doubtless to the fact that manufacturers have made great advance in adapting these sorts to use.

Following is a statement of prices of Pará grades, one year ago, one month ago, and on February 28—the current date.

PARÁ.	Mar. 1, '04.	Feb. 1, '05.	Feb. 28.
Islands, fine, new.....	102 @ 103	121 @ 122	125 @ 126
Islands, fine, old.....	@	none here	none here
Upriver, fine, new.....	106 @ 107	124 @ 125	128 @ 129
Upriver, fine, old.....	108 @ 109	none here	none here
Islands, coarse, new.....	60 @ 67	70 @ 71	71 @ 76
Islands, coarse, old.....	none here	none here	none here
Upriver, coarse, new.....	83 @ 84	92 @ 95	96 @ 98
Upriver, coarse, old.....	85 @ 86	none here	none here
Caucho (Peruvian) sheet.....	100 @ 107	71 @ 72	72 @ 73
Caucho (Peruvian) ball.....	76 @ 77	80 @ 81	79 1/2 @ 80



The rate of increase for other sorts in New York has been even more marked, the figures being:

AFRICAN.		CENTRALS.	
Sierra Leone, 1st quality 100 @ 101		Esmeralda, sausage... 84 @ 85	
Massai, red... 100 @ 101		Guayaquil, strip... 72 @ 73	
Benguella... 78 @ 79		Nicaragua, scrap... 83 @ 84	
Cameroon ball... 67 @ 68		Panama, slab... 64 @ 65	
Acera flake... 32 @ 33		Mexican, scrap... 84 @ 85	
Lopori ball, prime... 106 @ 107		Mexican, slab... 64 @ 65	
Lopori strip, prime... 94 @ 95		Mangabeira, sheet... 50 @ 59	
Ikelemba... none here		EAST INDIAN.	
Madagascar, pinky... 84 @ 85		Assam... 98 @ 99	
		Borneo... 42 @ 43	

#### Late Pará cables quote:

Per Kilo.		Per Kilo.	
Islands, fine... 0\$600		Upriver, fine... 7\$600	
Islands, coarse... 3\$600		Upriver, coarse... 5\$300	
Exchange, 13 $\frac{3}{4}$ d.			

#### Last Manáos advices:

Upriver, fine... 7\$750	Upriver, coarse... 5\$050
Exchange, 13 $\frac{3}{4}$ d.	

#### NEW YORK RUBBER PRICES FOR JANUARY (NEW RUBBER).

	1904.	1903.
Upriver, fine... 1.18 @ 1.25	94 @ 1.05	86 @ 92
Upriver, coarse... 90 @ 94	77 @ 83	71 @ 76
Islands, fine... 1.14 @ 1.22	90 @ 1.02	84 @ 89
Islands, coarse... 65 @ 71	56 @ 65	53 @ 62
Cametá... 64 @ 71	55 @ 64	55 @ 64

The percentage of the various grades in the imports of India-rubber into the United States were as follows:

	1902.	1903.	1904.
Pará fine.....	39.64	37.63	34.48
Pará coarse .....	19.40	18.63	17.52
Centrals, Caucho, and Pernambuco .....	11.86	12.29	14.68
African.....	29.10	31.45	33.32

#### Statistics of Para Rubber (Excluding Caucho).

NEW YORK.				
Fine and Medium.	Coarse.	Total 1905.	Total 1904.	Total 1903.
Stocks, January 1... tons 51	18 =	69	56	72
Arrivals, January... 1369	104 =	2073	1418	1624
Aggregating... 1420	122 =	2142	1474	1696
Deliveries, January... 1297	688 =	1985	1410	1443
Stocks, January 31... 123	34 =	157	64	253

	PARÁ.			ENGLAND.		
	190	1904.	1903.	1905.	1904.	1903.
Stocks, January 1. <i>tons</i>	200	370	365	175	545	885
Arrivals, January.....	3775	3760	2500	905	1145	1190
Aggregating.....	3975	4130	2865	1080	1690	2075
Deliveries, January...	2719	3565	2710	725	1100	1025
Stocks, Jan. 31...	1256	565	155	355	590	1050

	1904.	1903.	1905.	1904.	1903.
World's visible supply, January 31... tons 2972			3717		2783
Pará receipts, July 1 to January 31... 16,326			16,235		13,846
Pará receipts of Caucho, same dates... 1504			1519		924
Afloat from Pará to United States, Jan. 31... 529			1418		740
Afloat from Pará to Europe, January 31... 675			1020		585

#### Rubber Scrap Prices.

NEW YORK quotations—prices paid by consumers for car load lots, in cents per pound—show some slight changes since our last report, as follows:

Old Rubber Boots and Shoes—Domestic... 61 $\frac{1}{2}$ @ 61 $\frac{1}{2}$	
Do — Foreign... 51 $\frac{1}{2}$ @ 51 $\frac{1}{2}$	
Pneumatic Bicycle Tires... 4 $\frac{1}{4}$ @ 4 $\frac{1}{2}$	
Solid Rubber Wagon and Carriage Tires... 6	
White Trimmed Rubber... 81 $\frac{1}{2}$ @ 83 $\frac{1}{2}$	
Heavy Black Rubber... 4	
Air Brake Hose... 21 $\frac{1}{2}$ @ 21 $\frac{1}{2}$	
Fire and Large Hose... 2 @ 21 $\frac{1}{2}$	
Garden Hose... 13 $\frac{1}{8}$ @ 13 $\frac{1}{8}$	
Matting... 34 @ 1	

In regard to the financial situation, Albert B. Beers (broker in India-rubber, No. 68 William street, New York), advises us: "The same monetary conditions have continued through January as reported for February, rates being easy with a good demand for paper from both city and out-of-town banks, at 4 @ 5 per cent. for the best rubber names, and 5 $\frac{1}{4}$  @ 6 per cent. for the smaller concerns."

#### United States Crude Rubber Imports (Official).

FROM —	1902.	1903.	1904.
United Kingdom... pounds 7,604,134		8,556,972	8,381,894
Germany... 2,379,353		2,176,346	2,766,724
Other Europe... 7,220,369		9,245,077	11,036,558
Central America... 1,062,184		1,133,814	1,382,528
Mexico... 263,181		256,260	335,917
West Indies... 47,355		16,286	12,886
Brazil... 30,504,703		31,950,915	34,564,419
Other South America... 1,230,902		1,759,904	1,923,314
East Indies... 509,609		612,345	1,470,516
Other Countries... 29,467		6,201	15,304
Total... pounds 50,851,257		55,744,120	61,889,758
Value... \$25,158,591		\$35,152,642	\$43,784,297
Average value per pound 49.4 cents.		63.1 cents.	70.7 cents.

#### Nicaragua.

##### RUBBER EXPORTS FROM BLUEFIELDS.

1904.	Pounds.	Gold Value.
July 1–September 30... 57,666		\$ 38,407.94
October 1–December 31... 94,810		65,527.07
Total... 152,476		\$103,935.01

#### Rubber Receipts at Manaos.

DURING January and seven months of the crop season for three years [courtesy of Messrs. Witt & Co.]:

FROM —	JANUARY.			JULY-JANUARY.		
	1905.	1904.	1903.	1905.	1904.	1903.
Rio Purús—Acre..... tons	1767	1650	720	3776	3851	2635
Rio Madeira.....	194	247	178	1880	1791	1478
Rio Jurúa.....	546	675	1226	1730	2110	2015
Rio Javary—Iquitos.....	239	344	257	2055	1795	1252
Rio Solimões.....	169	104	154	603	570	1076
Rio Negro.....	164	113	126	339	267	325
Total....	3079	3133	2661	10,383	10,384	8781
Caucho.....	1092	712	596	1742	1613	1196
Total.....	4171	3845	3257	12,125	11,997	9977

#### Antwerp.

TO THE EDITOR OF THE INDIA RUBBER WORLD: As has already been intimated in your pages our monthly inscription sale on January 27, when about 475 tons out of 502 offered were sold, resulted in a substantial advance over estimation. The average advance was about 3 per cent. The fine Upper Congo sorts realized especially high prices—in some cases 6 and 7 per cent. over the monthly sale of December 16. Since the January sale about 59 tons have changed hands at very firm prices. The next large sale will take place on February 22, when about 278 tons will be exposed. Among the principal lots, the following are especially worth mentioning:

	Valuation.
28 tons Uelé strips... francs 10.50	
27 " Aruwimi... 10.20	
14 " Upper Congo Pieces... 10.	
13 " Lopori I... 11.	
48 " Lopori II... 7.75	
14 " Upper Congo ball... 10.90	

C. SCHMID & CO., SUCCESEURS.

Antwerp, February 11, 1905.

[CABLE reports indicate that the prices realized on February 22 exceeded all records. All the offerings found buyers, some lots at 70 centimes [=about 6 $\frac{1}{2}$  cents] above the valuations based upon the January sale.]

## RUBBER ARRIVALS AT ANTWERP.

FEB. 1.—By the *Anversville*, from the Congo:

Bunge & Co. .... (Société Générale Africaine) kilos	156,000
Do ..... (Komité Spécial Katanga)	6,000
Do ..... (Société "La Kotto")	1,000
Do ..... (Société des Sultanats du Haut Ubangi)	9,000
Comptoir Commercial Congolais .....	24,000
Société A. B. I. R. ....	8,000
Société Coloniale Anversoise. .... (Cie. de Lomami)	16,000
Do ..... (Belge du Haut Congo)	6,000
Do ..... (La Lulunga)	5,000
Do ..... (Sud Kamerun)	3,000
L. & W. Van de Velde. .... (Cie. du Kasai)	83,000
Société Générale de Commerce. .... (Société La Lobay)	3,000
Do ..... (Alimaïenne)	7,000
Comptoir des Produits Coloniaux. ....	
..... (Société Ekele-Kadei Sangha)	17,000
Cie. Commerciale des Colonies. ....	
..... (Société La Haut Sangha)	8,000
Do ..... (Société La Haut Sangha)	1,000
Charles Dethier. .... (Société La M'Poko)	11,000
	362,000

## Iquitos Rubber Exports, 1903.

DESIGNATIONS.	New York.	Liverpool.	Havre.	Total.
Jebe fino .....	1,937	250,627	227,713	480,277
Jebe entrefino. ....		12,907	28,445	41,352
Jebe sernamby. ....		120,730	90,148	216,878
Jebe débil. ....		14,870	3,182	18,052
Caucho .....	573	35,139	16,024	51,736
Caucho sernamby. ....	3,069	564,856	351,154	919,079
Total, 1903. ....	5,579	1,014,129	716,666	1,736,374
Total, 1904. ....	30,171	1,236,331	644,099	1,910,601

{The first three items relate to *Hevea* rubber—fine, medium, and coarse. "Jebe débil" is also known as "weak rubber." The remaining two items are *Caucho* ball and slab.]

## IQUITOS EXPORTERS OF RUBBER, 1903.

Julio C. Arana. .... kilos	181,665	Barcia Hermanos .....	69,363
Wesche y Cia. ....	170,402	Benasayag, Toledano y	
Kahn & Polack. ....	168,044	Cia. ....	55,963
Kahn y Cia. ....	156,321	G. Delgado é Hijo. ....	47,631
Luis F. Morey. ....	155,905	Meza & Brüggmann. ....	42,653
David Cuzes. ....	122,804	Farache y Hermano. ....	22,877
Marius & Levy. ....	110,315	Tomás Ramirez y Hno. ....	10,229
Manuel Rocha é Hijos. ....	115,686	J. Dahmen, Jr. ....	2,955
Pinto Hermanos. ....	110,962	Machado y Rivero. ....	2,457
Hernández, Magne y		Guillermo A. de Brito. ....	935
Cia. ....	98,164		
A. Morey y Cia. ....	82,005	Total. .... kilos	1,736,374

## Liverpool.

WILLIAM WRIGHT & CO. [report February 1]:

*Fine Pará.*—The market has been fairly active, but the paucity of stock and high prices ruling prevent business. Prices have advanced 2d. per pound; this has been caused by delayed receipts and strong demand in the exporting markets. The longer the delay in receipts continues the less chance there is, in our mind, of any serious break in values; taking into account the almost entire lack of reserve of stock and present rate of demand, manufacturers will, we think, do well to take advantage of every temporary break in prices. Spot market has been firm, but closes easier, value of Upriver 5s. 3d., Island 5s. 1½d. Forward sellers have been acting very cautiously, otherwise a large business would have resulted. Near positions close at 5s. 3½d.; February-March, 5s. 3½d.; and March-April 5s. 3d.

*Africans* have been in demand, and prices have advanced all round. Gold Coast lumps have been in chief demand, this grade being scarce, and a good business has been done chiefly in old up to 2s. 4½d., and new, for delivery, up to 2s. 3½d., January-February. Red Sierra Leone niggers have advanced to 3s. 11½d., owing to scarcity.

EDMUND SCHLÜTER & CO. report [January 31]:

Pará rubber was firm during January. With a continued good demand (especially in the United States) the arrivals of rubber in Pará and Manáos were readily absorbed, and prices advanced gradually to 5s. 3½d. for fine hard in warehouse and 5s. 3d. forward delivery, with 2d. less for soft cure. The highest prices were not maintained at the close. The visible supply of Pará grades on December 31 and January 31 was:

December 31. ....	4210	4144	3305	3351	2446	1100
January 31. ....	4508	3776	3472	3908	4249	3734

The increase of about 1100 tons [in January over December] in the visible supply is more than was expected by the market, and it may cause some decline, but it must not be overlooked that the larger proportion of the rubber in sight is already sold and that a large proportion (700 tons) consists of *Caucho*. The quantity afloat to Europe is less by about 300 tons than on January 31, 1904, and the stock by 200 tons. While a decline in the price of fine Pará rubber would be welcomed by the whole trade, the elements that have made for higher prices (no increase in supplies and continued good demand) remain, and they will continue to influence the value, irrespective of temporary fluctuations.

## London.

## PLANTATION RUBBER (PARA SEED).

*January 20 Auction.*—Ceylon and Straits: 15 packages offered and sold. Fine thin biscuits at 6s. 1d. [= \$1.48]; ditto rather moldy and damp at 6s.; ditto inferior at 5s. 9d.; scrap at 4s. Also: Forty-three packages *Manicoba* offered and sold. Fine clean sheet at 4s. 5¼d. @ 4s. 7d.; good clean scrap at 3s. 3¼d. @ 3s. 4d.

*February 3 Auction.*—Twenty-seven packages offered and 28 sold. Ceylon fine biscuits at 6s. @ 6s. 1½d. [= \$1.49]; fair to good fair scrap at 4s. 3½d. @ 4s. 4½d.; dirty and perished at 3s. 3d. Straits fine biscuits at 6s. 1½d.; fair scrap and sheet at 4s. Also: *Manicoba* fine clean thin plantation sheet at 4s. 8½d. [= \$1.14½]; fair, little mixed 4s. 6¾d.

*February 10.*—Value of Ceylon fine thin biscuits on the spot is 6s. 2d. @ 6s. 3d. [= \$1.50 @ \$1.52].

*February 17 Auction.*—Thirty packages sold, fine thin Ceylon biscuits 6s. 4d. @ 6s. 4½d. [= \$1.55]; mixed colored inferior, 6s. @ 6s. 2½d.; fine clean scrap 4s. 6d. @ 4s. 8d. Straits, fine biscuits and sheet 6s. 3½d. @ 6s. 4½d.; 4s. 3d. Also: *Manicoba*, 45 packages sold, good clean thin Plantation sheet, 4s. 8½d.; good scrap 3s. 5d.

## Ceylon Exports (Plantation Rubber).

	1903.	1904.
To Great Britain .....	pounds 39,456	61,137
" Germany .....	1,672	7,221
" Australia .....	...	1,884
" United States. ....	400	1,381
" Holland. ....	...	127
" India .....	...	119
" Belgium. ....	156	111
" France. ....	...	60
Total. ....	41,684	72,040
[Total, 1902—21,168 pounds; total, 1901—7392 pounds.]		

## Rotterdam Rubber Statistics.

## INDIA-RUBBER ARRIVALS (KILOS).

Thimbles, red. ....	142,100	Soudan. ....	69,700
Congo ball. ....	28,800	All other. ....	7,700
Kassai, red. ....	336,500		
Kassai, black. ....	76,300	Total, 1904. ....	1,218,100
Upper Congo. ....	532,600	Total, 1903. ....	799,300
Sierra Leone. ....	5,500	Total, 1902. ....	991,700
Mozambique. ....	1,500	Total, 1901. ....	853,250
Java and Sumatra. ....	17,400	Total, 1900. ....	877,450

Stocks, January 1. ....	1905. 68,400	1904. 64,000	1903. 8,100	1902. 67,300	1901. 80,600
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## BALATA ARRIVALS (KILOS).

Surinam sheet. ....	1904. 196,900	1903. 281,000	1902. 244,500	1901. 211,950	1900. 161,600
Venezuela block. ....	29,200	22,000	30,700	31,450	23,500

Total. ....	226,100	303,000	275,200	243,400	185,100
Stocks, end year. ....	174,100	3,700	....	....	....

## GUTTA-PERCHA (TONS).

Stocks, first of year. ....	1904. 194	1903. 218	1902. 263	1901. 185	1900. 307	1899. 180
Arrivals during year. ....	38	145	267	314	280	145

Aggregating. ....	232	366	530	409	507	675
Sales during year. ....	58	172	312	236	402	368

Stocks, end of year. ....	174	194	218	263	185	307
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*Rotterdam.*

A. KNOTTENBELT & Co. report [January 31]:

NOTWITHSTANDING the somewhat unsettled condition of the Pará market, where the changes in prices were, after all, of small importance, the tone of our market, since our last report, remains strong for medium qualities, and the lots of African rubber offered for public sale (by written bids) created considerable interest among buyers. The following quantities were sold:

About 15150 Kilos Upper Congo  
About 1050 " Congo  
About 4550 " red Thimbles

Prices again showed an increase over those of the preceding sale. Orders had come in from different points, and the quantity offered could easily have been sold several times over.

*Balata.*—There has been considerable demand for Surinam leaf, and some small lots changed hands. These transactions have caused holders to remain very firm, and they are confident that, after the long continued reticence, buyers will at last be compelled to come to them, especially as the prospects for a considerably smaller crop next season can no longer be denied. There have been no transactions in Venezuela block, on account of a lack of arrivals.

*Bordeaux.*

R. HENRY, successor to the ancient house of Jules Pichard, supplies the following details of importations of Caouchouc for the past two years:

DESIGNATION.	1903.	1904.	DESIGNATION.	1903.	1904.
Soudan twists.....kilos	550,500	368,057	Bassam cakes.....		3,285
Soudan niggers.....	159,100	239,636	Congo sorts.....	50,000	46,650
Conakry niggers.....	148,000	178,700	Bissao Guinée Portu-		
Gambia or Cassa-			guese.....		3,100
mance.....	144,100	111,355	Java and Sumatra	2,500	15,825
Lahou twists.....		83,370	Madagascar.....	3,500	45,700
Lahou niggers.....	19,900	29,010	Central America*..	3,000	5,000
Lahou cakes.....		16,375	Balata.....		2,650
Lahou cakes (Boutele)	11,000	16,375	New Calédonia.....	300	900
Lahou Gouros.....		5,290	Total..... kilos	1,118,000	1,182,708
Bassam lumps.....	20,500	22,300	[* Including Mexico.]		
Bassam niggers.....		6,500			

## SUMMARY FOR FOUR YEARS PRECEDING.

	1899.	1900.	1901.	1902.
Kilos .....	175,589	239,532	235,380	678,000

It is pointed out that the failure of the importations at Bordeaux during the past year to show the customary rate of increase over the preceding year was due largely to the notable falling off in the production of Soudan sorts. This situation is a matter of no small concern to the Bordeaux trade, the leaders of which are urging the necessity of governmental measures to preserve the rubber trade of the French colonies in West Africa, both in the volume of production and its quality. The governor general, before his departure for Dakar in October last, was strongly urged in Bordeaux to at once give effect to the decree regulating the condition of rubber at the time of shipment, and later a petition was sent to him, and it is hoped that these efforts will result in the suppression of fraud and the improvement of the product. It is only by such means that the confidence of consumers can be secured, and the standard of the Bordeaux market maintained. Importers are urged to recommend that their agents in Africa take proper care of the rubber passing through their hands, and to see that each quality is packed separately and designated by special marks. It would be desirable to have all lots separated on their arrival at such points as Bammako, Kayes, and Saint Louis, and the pitchy portions separated from the balls or cakes. The receipt of merchandise selected in such a manner would be very much appreciated by purchasers. Quotations for the principal French African varieties have followed the variations in the general

market during the year, though the poorer quality of a number of lots from the Soudan has caused a notable decline in prices for rubber of this description, as will be seen from the figures which follow.

## BORDEAUX COMPARATIVE PRICES.

[In Francs per Kilogram.]

DESIGNATIONS.	January.	December.
Soudan twists.....	9.30@ 9.50	8.50@ 8.80
Soudan niggers.....	9.40@ 9.70	9. " @ 9.75
Conakry niggers.....	10.10@ 10.35	10.40@ 10.75
Gambia A P.....	8.20@ 8.50	8.10@ 8.35
Gambia A.....	7.20@ 7.50	7.70@ 7.80
Gambia A M.....	6.75@ 7.	6.60@ 6.80
Gambia B.....	5.75@ 6.	5.60@ 5.80
Gambia C.....	4.85@ 5.10	4.60@ 4.80
Lahou cakes.....	8. " @ 8.25	7.50@ 7.75
Lahou twists.....	9.05@ 9.25	8.40@ 8.70

## PRICES (IN FRANCS PER KILO) FEBRUARY 15.

Conakry niggers....	10.75@ 10.90	Cassamance A.....	7.80@ 8.
Soudan do red.....	9.80@ 10.25	Cassamance A M....	6.80@ 7.20
Soudan do white ...	9.40@ 9.75	Cassamance B.....	5.80@ 6.20
Soudan twists.....	8.70@ 8.90	Lahou niggers 1.....	9.15@ 9.50
Madagascar Majunga	6.50@ 7.25	Lahou niggers 2.....	8.20@ 8.80
Do Tamatave.....	8.60@ 9.	Lahou cakes.....	7.50@ 7.70
Bassam lumps, large	5.90@ 6.20	Mexican slabs. . . . .	8.80@ 9.20

*Gutta-Percha.*

THE *Straits Times* (Singapore, December 31), in its trade review for 1904, says:

The Gutta-percha trade still continues unsatisfactory, exports falling by 30 per cent., and in the demand for the United Kingdom by over 80 per cent. A contract with a local German firm for supplies necessitated by the agreement between the Dutch and German governments for cable-laying accounts for exports to the continent keeping well up. Prices were even more than at the corresponding dates last year and very low qualities predominate. Borneo rubber has risen in quantity by over 100 per cent., and Jelutong rubber evidences a continuous increase.

SINGAPORE exports of Gutta-percha for five years are thus reported by Weise & Co., of Rotterdam:

	1900.	1901.	1902.	1903.	1904.
Tons .....	6158	5592	4236	3286	2886

## IMPORTS FROM PARA AT NEW YORK.

[The Figures Indicate Weights in Pounds.]

February 4.—By the steamer *Basil*, from Manáos and Pará:

IMPORTERS.	Fine.	Medium.	Coarse.	Caucho.	Total.
Poel & Arnold.....	168,400	40,300	96,000	45,700=	350,400
General Rubber Co.....	205,700	36,300	85,300	4,200=	331,500
A. T. Morse & Co.....	104,600	23,600	122,100	12,200=	262,500
New York Commercial Co.	120,100	34,800	31,800	6,400=	193,100
Lionel Hagenaaers & Co..	11,900	.....	5,300	.....=	17,200
Hagemeyer & Brunn.....	10,200	.....	4,800	.....=	15,000

Total .....

February 16.—By the steamer *Maranhense* from Manáos and Pará:

A. T. Morse & Co.....	328,300	64,300	146,000	110,700=	649,300
Poel & Arnold.....	237,400	53,600	134,400	94,400=	519,800
General Rubber Co....	276,100	43,200	135,900	5,700=	460,900
New York Commercial Co.	160,400	38,900	41,600	48,100=	289,000
Neale & Co.....	2,700	300	22,800	.....=	25,800
Hagemeyer & Brunn....	9,000	1,900	14,700	.....=	25,600
Edmund Reeks & Co....	9,700	.....	15,200	.....=	24,900
Lionel Hagenaaers & Co..	8,800	.....	7,200	.....=	16,000
G. Amsinck & Co.....	2,900	600	5,700	.....=	9,200

Total. . . . .1,035,300 202,800 523,500 258,900= 2,020,500

[NOTE.—The steamers *Huher* and *Bernard*, from Pará, are due at New York on March 1 and March 7 respectively with 1000 tons and 1000 tons Rubber.]

## PARA RUBBER VIA EUROPE.

JAN. 30.—By the <i>Etnaria</i> —Liverpool:	FEB. 2.—By the <i>Advance</i> —Mollendo:	FEB. 8.—By the <i>Armenian</i> —Liverpool:
General Rubber Co. (Fine).....	Chicago Bolivian Rubber Co. (Fine)..	A. T. Morse & Co. (Coarse.) .....
Poel & Arnold (Coarse).....		
	FEB. 2.—By the <i>Teutonic</i> —Liverpool:	FEB. 14.—By the <i>Umbria</i> —Liverpool:
	Poel & Arnold (Fine).....	General Rubber Co. (Fine).....
	Windmuller & Reolker (Caucho)....	

FEB. 16.—By the <i>Majestic</i> =Liverpool:	
Poel & Arnold (Coarse).....	30,000
FEB. 20.—By the <i>Campania</i> =Liverpool:	
General Rubber Co. (Fine).....	11,500

## OTHER ARRIVALS IN NEW YORK

## CENTRALS.

JAN. 24.—By the <i>Pennycuik</i> =Bahia:	
J. H. Rossbach & Bros.....	18,500
Hirsch & Kaiser.....	13,500 32,000
JAN. 21.—By the <i>Allegany</i> =Carthage:	
Aug. T. Hanneburg.....	4,500
D. A. De Lima & Co.....	3,000
Lawrence Johnson & Co.....	1,800
Kunhardt & Co.....	1,000
H. H. Clavin & Co.....	1,000
Isaac Kuble & Co.....	1,000
Isaac & Samuels.....	800 13,100
JAN. 26.—By the <i>Grangese</i> =Ceara:	
Emile Boris.....	11,000
JAN. 26.—By the <i>Albania</i> =Colon:	
E. B. Strout.....	3,700
J. A. Medina & Co.....	2,800
Gabriel Perigault.....	3,000
Isaac Brandon & Bros.....	1,500
American Trading Co.....	1,900
Eggers & Heinlein.....	900
Meyer & Hecht.....	700
Jimenez & Escobar.....	400 14,900
JAN. 27.—By the <i>Volke</i> =Hamburg:	
Winter & Smillie.....	6,500
JAN. 28.—By the <i>El Dia</i> =New Orleans:	
A. T. Morse & Co.....	9,000
Manhattan Rubber Mfg. Co.....	2,000 11,000
JAN. 28.—By the <i>Grenada</i> =Frimid:	
Thebaud Brothers.....	3,500
JAN. 30.—By the <i>Monterey</i> =Mexico:	
H. Marquardt & Co.....	3,000
Fred. Probst & Co.....	1,200
Harburger & Stack.....	1,500
E. Steiger & Co.....	500
E. N. Tibbals & Co.....	1,000 7,200
FEB. 1.—By the <i>Terence</i> =Bahia:	
J. H. Rossbach & Bros.....	12,000
FEB. 2.—By the <i>Advance</i> =Colon:	
G. Amsinck & Co.....	10,200
A. Santos & Co.....	5,200
J. A. Medina & Co.....	4,100
W. R. Grace & Co.....	3,800
Lawrence Johnson & Co.....	7,800
Dumarest Bros. & Co.....	3,000
Roldan & Van Sickle.....	3,000
Otto Gerda.....	1,900
Gabriel Perigault.....	21 00
Belgian Co. Cent. Am.....	1,800
E. B. Strout.....	1,900
A. Rosenthal's Sons.....	1,300
National Sewing Mach. Co.....	1,300
A. M. Capen's Sons.....	1,300
Lanman & Kemp.....	1,000
American Trading Co.....	1,000
Pedro A. Lopez.....	1,000
Silva, Bussenius & Co.....	1,000
Smithers, Nordenholt & Co.....	900 53,600
FEB. 3.—By the <i>El Sud</i> =New Orleans:	
Manhattan Rubber Mfg. Co.....	7,500
A. N. Rotholz.....	1,500
A. T. Morse & Co.....	3,500
G. Amsinck & Co.....	1,500 14,000
FEB. 4.—By the <i>Lucania</i> =Liverpool:	
Wallace L. Gough.....	9,000
FEB. 6.—By the <i>Mesaba</i> =London:	
Poel & Arnold.....	11,500
FEB. 7.—By the <i>Altai</i> =Carthage:	
Pedro A. Lopez.....	5,000
Banco de Exportas.....	3,000
Isaac Brandon & Bros.....	1,000 9,000
FEB. 7.—By the <i>City of Washington</i> =Colon:	
Hirzel, Feltman & Co.....	17,600
G. Amsinck & Co.....	3,700
Piza, Nephews & Co.....	3,200 24,500
FEB. 9.—By the <i>Carib II</i> =Honduras:	
Eggers & Heinlein.....	6,700
Herman Angler.....	2,500
Bennatou & Co.....	2,000
H. W. Peabody & Co.....	1,000
G. Amsinck & Co.....	1,000
A. S. Lascellas & Co.....	500
K. Mandell & Co.....	400 14,100

## CENTRALS—Continued.

FEB. 10.—By the <i>Orizaba</i> =Colon:	
Hirzel, Feltman & Co.....	7,500
G. Amsinck & Co.....	3,000
Gabriel Perigault.....	4,400 14,700
FEB. 11.—By the <i>Florida</i> =New Orleans:	
Manhattan Rubber Mfg. Co.....	9,000
A. T. Morse & Co.....	800
E. B. Strout.....	3,000
J. A. Medina & Co.....	1,500 21,500
FEB. 11.—By the <i>Pretoria</i> =Hamburg:	
George A. Alden & Co.....	34,000
A. T. Morse & Co.....	3,000 37,000
FEB. 14.—By the <i>Probus</i> =New Orleans:	
A. T. Morse & Co.....	8,000
G. Amsinck & Co.....	7,000
Geo. A. Alden & Co.....	3,000 18,000
FEB. 15.—By the <i>Sunta</i> =Colombia:	
D. A. De Lima & Co.....	2,000
Roldan & Van Sickle.....	2,000
Mecke & Co.....	1,500
American Trading Co.....	1,200
August T. Hanneburg.....	1,000
Lawrence Johnson & Co.....	1,200
Banco de Exportas.....	900
Joaquin Ferro.....	900 10,700
FEB. 16.—By the <i>Saguna</i> =Colon:	
Dumarest Bros. & Co.....	4,500
Hirzel, Feltman & Co.....	4,200
G. Amsinck & Co.....	4,300
Roldan & Van Sickle.....	3,500
A. Santos & Co.....	2,900
Lawrence Johnson & Co.....	1,800
American Trading Co.....	1,600
Eggers & Heinlein.....	1,100
Fidanque Bros. & Co.....	1,300
Gabriel Perigault.....	1,100
Borling & DeLeon.....	600 26,000
FEB. 17.—By the <i>Cid</i> =New Orleans:	
Manhattan Rubber Mfg. Co.....	3,000
FEB. 18.—By the <i>Havana</i> =Mexico:	
Harburg & Stack.....	3,200
E. Steiger & Co.....	1,600
H. Marquardt & Co.....	1,000
L. N. Chemedin & Co.....	1,500 7,000
FEB. 18.—By the <i>Cavour</i> =Bahia:	
J. H. Rossbach & Bros.....	22,500
Hirsch & Kaiser.....	15,000
A. D. Hitch & Co.....	11,500 49,000
FEB. 20.—By the <i>St. Louis</i> =London:	
A. T. Morse & Co.....	11,000
J. H. Rossbach & Bros.....	10,000
Poel & Arnold.....	11,000 32,000
FEB. 20.—By the <i>Byron</i> =Bahia:	
Hirsch & Kaiser.....	16,000
J. H. Rossbach & Bros.....	10,000 26,000
FEB. 23.—By the <i>Blucher</i> =Hamburg:	
Poel & Arnold.....	13,000
Rubber Trading Co.....	5,000
George A. Alden & Co.....	2,000 20,000
FEB. 23.—By the <i>Allianca</i> =Colon:	
Gabriel Perigault.....	9,200
J. A. Medina & Co.....	8,900
Lawrence Johnson & Co.....	3,200
George A. Alden & Co.....	3,000
Isaac Brandon & Bros.....	2,000
E. B. Straub.....	2,000
W. Loiza & Co.....	1,200
American Trading Co.....	1,200
A. Rosenthal's Sons.....	1,000
A. Held.....	1,000
D. A. De Lima & Co.....	1,000
Pedro A. Lopez.....	800
G. Amsinck & Co.....	700
Meyer Hecht.....	600 34,900

## AFRICANS.

JAN. 27.—By the <i>Volke</i> =Hamburg:	
A. T. Morse & Co.....	50,000
Earle Brothers.....	16,000
Poel & Arnold.....	22,400
Rubber Trading Co.....	15,000
George A. Alden & Co.....	4,500 108,000
JAN. 28.—By the <i>Baltic</i> =Liverpool:	
George A. Alden & Co.....	70,000
Poel & Arnold.....	70,000
A. T. Morse & Co.....	58,000 198,000
JAN. 30.—By the <i>Etruria</i> =Liverpool:	
George A. Alden & Co.....	25,000
Wallace L. Gough.....	11,500
Robinson & Tallman.....	3,000 39,500
FEB. 1.—By the <i>Cevic</i> =Liverpool:	
A. T. Morse & Co.....	22,500
Henry A. Gould Co.....	5,500 28,000

## AFRICANS—Continued.

FEB. 2.—By the <i>Teutonic</i> =Liverpool:	
A. T. Morse & Co.....	28,000
Poel & Arnold.....	1,000 29,000
FEB. 3.—By the <i>Probus</i> =Hamburg:	
A. T. Morse & Co.....	45,000
Rubber Trading Co.....	11,000
George A. Alden & Co.....	10,000 66,000
FEB. 4.—By the <i>Lucania</i> =Liverpool:	
George A. Alden & Co.....	26,000
Poel & Arnold.....	15,000
A. T. Morse & Co.....	10,000 51,000
FEB. 6.—By the <i>Hannover</i> =Lisbon:	
General Rubber Co.....	112,000
FEB. 6.—By the <i>Zeeland</i> =Antwerp:	
A. T. Morse & Co.....	22,000
George A. Alden & Co.....	13,000
Joseph Cantor.....	3,000
Rubber Trading Co.....	3,500 42,000
FEB. 7.—By the <i>Statendam</i> =Rotterdam:	
Poel & Arnold.....	80,000
FEB. 8.—By the <i>Armentan</i> =Liverpool:	
Poel & Arnold.....	95,000
General Rubber Co.....	55,000 150,000
FEB. 11.—By the <i>Pretoria</i> =Hamburg:	
A. T. Morse & Co.....	22,000
Rubber Trading Co.....	3,000 25,000
JAN. 14.—By the <i>La Touraine</i> =Havre:	
A. T. Morse & Co.....	13,500
FEB. 14.—By the <i>Umbria</i> =Liverpool:	
George A. Alden & Co.....	48,000
Poel & Arnold.....	4,000
A. T. Morse & Co.....	4,000 56,000
FEB. 15.—By the <i>Finland</i> =Antwerp:	
A. T. Morse & Co.....	310,000
Poel & Arnold.....	135,000
George A. Alden & Co.....	85,000 530,000
FEB. 16.—By the <i>Majestic</i> =Liverpool:	
A. T. Morse & Co.....	40,000
Poel & Arnold.....	20,000
Joseph Cantor.....	5,000
Rubber Trading Co.....	7,000 72,000
FEB. 18.—By the <i>Graf Waldersee</i> =Hamburg:	
A. T. Morse & Co.....	15,000
Earle Brothers.....	5,500 20,500
FEB. 18.—By the <i>Bordeaux</i> =Havre:	
George A. Alden & Co.....	22,500
A. T. Morse & Co.....	13,500 36,000
FEB. 20.—By the <i>St. Louis</i> =London:	
Robinson & Tallman.....	7,000
Poel & Arnold.....	5,000 12,000
FEB. 20.—By the <i>Campania</i> =Liverpool:	
George A. Alden & Co.....	34,000
General Rubber Co.....	30,000
Poel & Arnold.....	20,000
A. T. Morse & Co.....	15,000 99,000
FEB. 23.—By the <i>Blucher</i> =Hamburg:	
A. T. Morse & Co.....	90,000
Poel & Arnold.....	45,000
George A. Alden & Co.....	7,000 142,000
FEB. 23.—By the <i>Boric</i> =Liverpool:	
Wallace L. Gough.....	35,000

## EAST INDIAN.

JAN. 26.—By the <i>Menominee</i> =London:	
Poel & Arnold.....	70,000
George A. Alden & Co.....	2,500 72,500
JAN. 30.—By the <i>Minneapolis</i> =London:	
Poel & Arnold.....	22,000
Wallace L. Gough.....	5,000
George A. Alden & Co.....	2,000 29,000
FEB. 2.—By the <i>Albenga</i> =Singapore:	
George A. Alden & Co.....	20,000
Winter & Smillie.....	7,500 27,500
FEB. 6.—By the <i>Mesaba</i> =London:	
Poel & Arnold.....	150,000
FEB. 4.—By the <i>Itanabadi</i> =Singapore:	
George A. Alden & Co.....	22,000
Winter & Smillie.....	20,000
Joseph Cantor.....	8,000 50,000
FEB. 4.—By the <i>Knight St. George</i> =Singapore:	
Poel & Arnold.....	60,000
FEB. 8.—By the <i>St. Hugo</i> =Singapore:	
Wallace L. Gough.....	600
Robert Brans & Co.....	17,000
Pierre T. Betts.....	11,000
Winter & Smillie.....	5,000 63,000



FEB. 14.—By the <i>Manitou</i> =London:			
Poe & Arnold	10,000		
A. T. Morse & Co.	20,000		
George A. Alden & Co.	5,000	87,000	

FEB. 14.—By the <i>Kennebec</i> =Singapore:			
George A. Alden & Co.	20,000		
Robert Branss & Co.	20,000		
D. A. Shaw & Co.	20,000		
Joseph Cantor	15,000	73,000	

FEB. 18.—By the <i>Grand H. Adessee</i> =Hamburg:			
A. T. Morse & Co.	11,000		
Eastern Trading Co.	3,000	14,000	

FEB. 23.—By the <i>Manitou</i> =London:			
Poe & Arnold	9,000		

FEB. 24.—By the <i>Briez Izel</i> =Singapore:			
George A. Alden & Co.	55,000		
Heubler & Co.	20,000		
Pierre T. Betts	20,000		
Robert Branss & Co.	10,000	105,000	

## GUTTA-JELUTONG.

JAN. 26.—By the <i>Menamance</i> =London:			
George A. Alden & Co.	215,000		

FEB. 4.—By the <i>Hydrant</i> =Singapore:			
George A. Alden & Co.	175,000		
Robert Branss & Co.	200,000		
Winter & Smillie	250,000	625,000	

FEB. 7.—By the <i>Knight St. George</i> =Singapore:			
Poe & Arnold	215,000		
Robert Branss & Co.	50,000	265,000	

FEB. 8.—By the <i>St. Hugo</i> =Singapore:			
George A. Alden & Co.	205,000		
Pierre T. Betts	55,000		
Wallace L. Gough	70,000		
D. A. Shaw & Co.	50,000	410,000	

FEB. 15.—By the <i>Kennebec</i> =Singapore:			
George A. Alden & Co.	400,000		
Hugenever & Brunn	210,000		
Robert Branss & Co.	145,000		
W. D. Wadleigh	100,000		
Robinson & Fallman	110,000		
D. A. Shaw & Co.	50,000	995,000	

FEB. 23.—By the <i>Briez Izel</i> =Singapore:			
George A. Alden & Co.	365,000		
W. D. Wadleigh	125,000		
Robinson & Fallman	110,000		
Wallace L. Gough	110,000		
Robert Branss & Co.	90,000		
Winter & Smillie	50,000		
Pierre T. Betts	22,000	882,000	

## GUTTA-PERCHA AND BALATA.

FEB. 3.—By the <i>Patricia</i> =Hamburg:			
To Order	22,500		

FEB. 7.—By the <i>Knight St. George</i> =Singapore:			
Winter & Smillie	22,500		

FEB. 8.—By the <i>St. Hugo</i> =Singapore:			
George A. Alden & Co.	11,000		
Pierre T. Betts	16,000	27,000	

FEB. 15.—By the <i>Kennebec</i> =Singapore:			
Winter & Smillie	7,000		

FEB. 20.—By the <i>St. Louis</i> =London:			
Kempshall Manufacturing Co.	1,500		

FEB. 23.—By the <i>Bleucher</i> =Hamburg:			
To Order	7,000		

FEB. 23.—By the <i>Briez Izel</i> =Singapore:			
George A. Alden & Co.	16,000		
Pierre T. Betts	13,500	29,500	

## BALATA.

FEB. 16.—By the <i>Marvel</i> =Ciudad Bolivar:			
Frame & Co.	2,000		

FEB. 16.—By the <i>Majestic</i> =Liverpool:			
Earle Brothers	3,000		

FEB. 20.—By the <i>St. Louis</i> =London:			
Earle Brothers	22,000		

FEB. 21.—By the <i>Fontabelle</i> =Demerara:			
Charles P. Shilstone	11,000		
Middleton & Co.	2,000	13,000	

## CUSTOM HOUSE STATISTICS.

## PORT OF NEW YORK—JANUARY.

Imports:	POUNDS.	VALUE.
India-rubber	7,262,527	\$5,613,696
Gutta-percha	47,436	13,247
Gutta-jelutong (Pontianak)	664,970	22,980
Total	7,974,933	\$5,649,873

Exports:	POUNDS.	VALUE.
India rubber	31,460	\$26,179
Reclaimed rubber	265,755	25,935
Rubber Scrap Imported	1,172,412	\$70,330

## BOSTON ARRIVALS.

	POUNDS.
JAN. 5.—By the <i>Sylvania</i> =Liverpool:	
Poe & Arnold—Fine	3,501
JAN. 6.—By the <i>Sylvania</i> =Liverpool:	
George A. Alden & Co.—African	18,081
JAN. 6.—By the <i>Bohemian</i> =Liverpool:	
George A. Alden & Co.—African	10,500
George A. Alden & Co.—Central	7,091
JAN. 11.—By the <i>Canadian</i> =Liverpool:	
George A. Alden & Co.—African	11,232
JAN. 19.—By the <i>Cymric</i> =Liverpool:	
Poe & Arnold—African	7,815
JAN. 20.—By the <i>Incunore</i> =Antwerp:	
Poe & Arnold—African	20,298
JAN. 25.—By the <i>Sachem</i> =Liverpool:	
George A. Alden & Co.—African	21,056
JAN. 26.—By the <i>Sachem</i> =Liverpool:	
Poe & Arnold—African	6,967
JAN. 31.—By the <i>Sylvania</i> =Liverpool:	
Poe & Arnold—African	5,801
Total	112,642

[Value, \$69,523.]

## GUTTA-PERCHA.

JAN. 9.—By the <i>Philadelphia</i> =London:	
Winter & Smillie	5,676

## OFFICIAL STATISTICS OF CRUDE INDIA-RUBBER (POUNDS).

## UNITED STATES.

MONTHS.	IMPORTS.	EXPORTS.	NET IMPORTS.
December, 1904	6,329,252	331,867	5,997,385
January-November	55,560,506	3,117,566	52,442,940
Twelve months, 1904	61,889,758	3,449,433	58,440,325
Twelve months, 1903	55,744,120	3,091,397	52,652,723
Twelve months, 1902	50,865,902	3,264,620	47,601,282

## GERMANY.

MONTHS.	IMPORTS.	EXPORTS.	NET IMPORTS.
December, 1904	4,677,200	1,334,300	3,342,900
January-November	33,115,200	8,717,720	24,397,480
Twelve months, 1904	38,295,400	10,052,020	28,243,380
Twelve months, 1903	34,200,740	11,214,280	23,076,460
Twelve months, 1902	33,633,360	13,719,200	19,914,160

## FRANCE.

MONTHS.	IMPORTS.	EXPORTS.	NET IMPORTS.
December, 1904	1,297,780	1,083,940	213,840
January-November	19,353,840	10,442,960	8,910,880
Twelve months, 1904	20,651,620	11,526,900	9,124,720
Twelve months, 1903	16,918,220	9,631,160	7,287,060
Twelve months, 1902	15,389,440	8,559,540	6,829,900

## BELGIUM.

MONTHS.	IMPORTS.	EXPORTS.	NET IMPORTS.
December, 1904	4,577,000	2,213,317	2,363,683
January-November	34,458,284	14,094,978	2,363,683
Twelve months, 1904	17,775,243	16,301,295	1,653,998
Twelve months, 1903	16,241,780	14,059,930	2,382,723
Twelve months, 1902	15,788,178	12,079,064	2,589,114

## GREAT BRITAIN.

MONTHS.	IMPORTS.	EXPORTS.	NET IMPORTS.
December, 1904	4,485,152	2,995,240	1,489,912
January-November	51,072,000	30,417,302	20,654,698
Twelve months, 1904	55,557,152	33,415,542	22,141,610
Twelve months, 1903	54,433,680	37,658,768	16,774,912
Twelve months, 1902	46,970,000	32,676,112	14,293,888

## ITALY.

MONTHS.	IMPORTS.	EXPORTS.	NET IMPORTS.
December, 1904			
January-November	1,389,960	132,000	1,257,960
Twelve months, 1904			
Twelve months, 1903	1,466,690	148,720	1,318,240
Twelve months, 1902	1,552,760	138,380	1,414,380

## AUSTRIA-HUNGARY.

MONTHS.	IMPORTS.	EXPORTS.	NET IMPORTS.
December, 1904	278,740	440	278,300
January-November	2,650,780	15,180	2,635,600
Twelve months, 1904	2,929,520	15,620	2,913,900
Twelve months, 1903	2,783,660	32,120	2,751,540
Twelve months, 1902	2,634,060	15,620	2,618,440

NOTE.—German statistics include Gutta-percha, Balata, old rubber, and substitutes. French, Austrian, and Italian figures include Gutta-percha. The exports from the United States embrace the supplies for Canadian consumption.

\* General Commerce

† Special Commerce

‡ Net Exports.

WILLIAM T. BAIRD, PRESIDENT

ROBERT B. BAIRD, VICE PRESIDENT

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Drills and all kinds of proofing from finest silks to  
heaviest ducks in all widths up to 60 inch.

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CLOTHS FOR MACKINTOSHES.

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Silks, Velvets, Fine Specialties and Single Textures.

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AUTOMATIC JAR RING CUTTING LATHES

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Vulcanizers of all diameters and lengths

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For Artificial Leather, Table Oil Cloth,  
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Anything that the hands can do  
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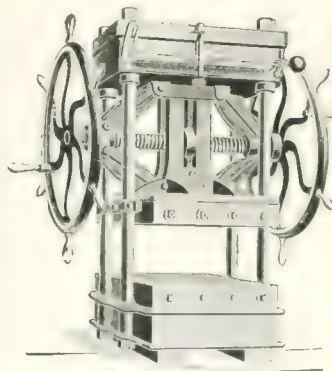
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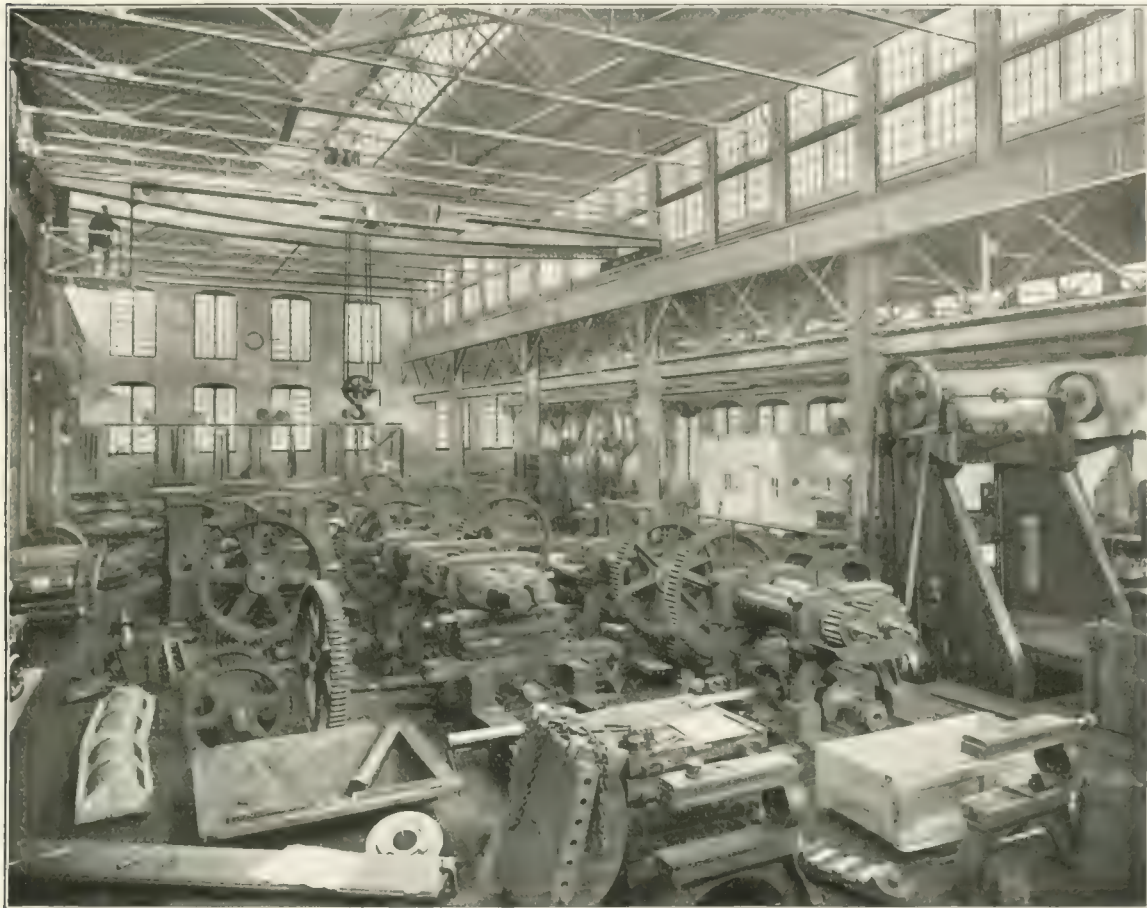
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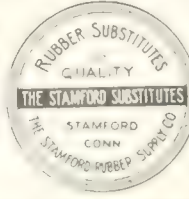
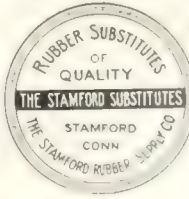
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RELIABILITY  
DURABILITY  
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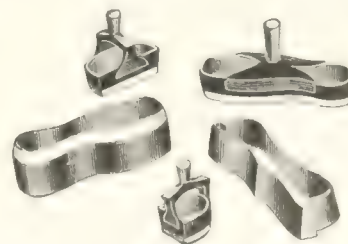
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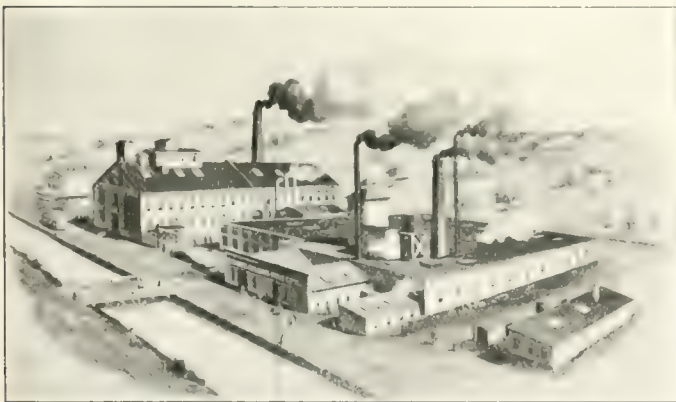
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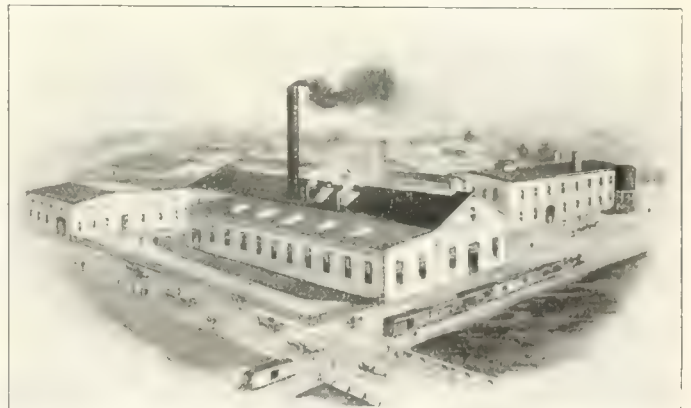
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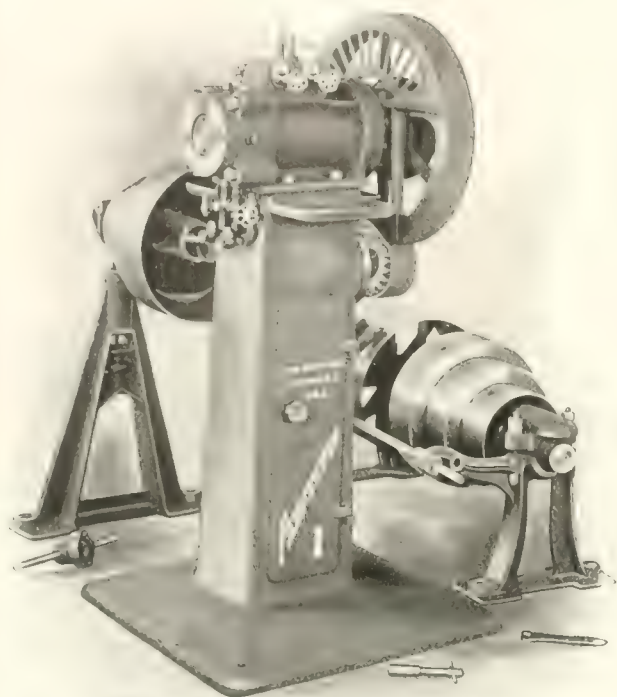
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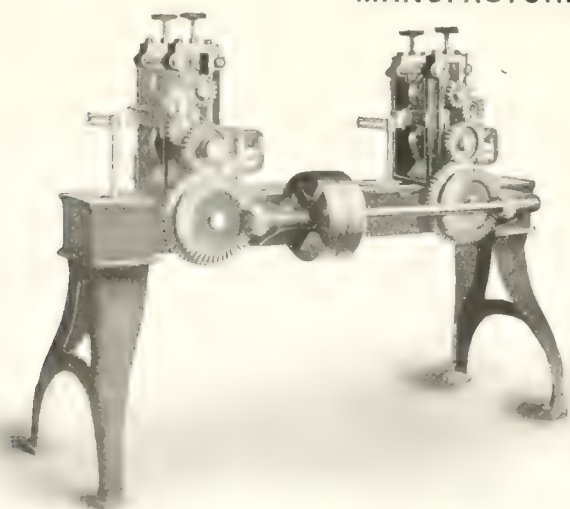
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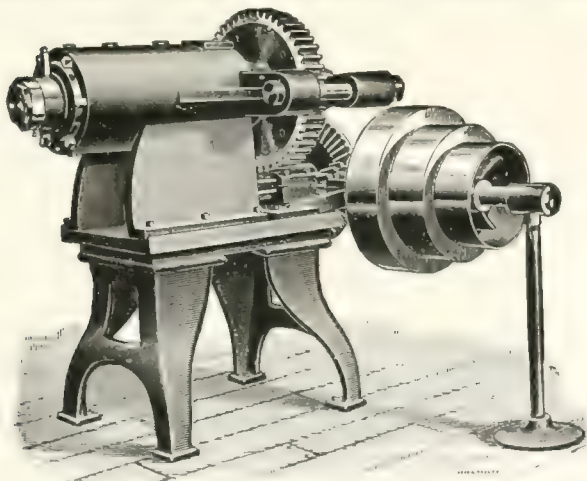
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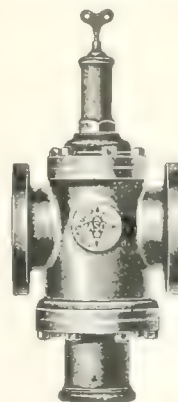
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Trenton Rubber Mfg. Co., Trenton, N. J.  
Voorhees Rubber Mfg. Co., Jersey City.  
Whitman & Barnes Mfg. Co., Akron, O.

### Air Brake Hose.

Boston Belting Co., Boston-New York.  
Boston Woven Hose & Rubber Co.  
Canadian Rubber Co. of Montreal.  
Combination Rubber Mfg. Co., Bloomfield, N. J.  
Eureka Rubber Mfg. Co. of Trenton.  
B. F. Goodrich Co., Akron, O.  
Home Rubber Co., Trenton, N. J.  
N. J. Car Spring & Rubber Co., Jersey City.  
Peerless Rubber Mfg. Co., New York.  
Republic Rubber Co., Youngstown, Ohio.  
Revere Rubber Co., Boston-New York.  
Voorhees Rubber Mfg. Co., Jersey City.  
Whitman & Barnes Mfg. Co., Akron, O.

### Belting (Canvas).

Boston Woven Hose & Rubber Co.  
Canadian Rubber Co. of Montreal.  
Eureka Fire Hose Co., New York.  
Peerless Rubber Mfg. Co., New York.  
Revere Rubber Co., Boston-New York.

### Billiard Cushions.

Boston Belting Co., Boston.  
Canadian Rubber Co. of Montreal.  
Combination Rubber Mfg. Co., Bloomfield, N. J.  
B. F. Goodrich Co., Akron, O.  
Manhattan Rubber Mfg. Co., New York.  
New York Belting & Packing Co., Ltd.  
New York Rubber Co., New York.  
Revere Rubber Co., Boston-New York.  
Whitman & Barnes Mfg. Co., Akron, O.

### Blankets—Printers'.

Boston Belting Co., Boston.  
Canadian Rubber Co. of Montreal.  
Hodgman Rubber Co., New York.  
Liverpool Rubber Co., Liverpool, Eng.  
N. J. Car Spring & Rubber Co., Jersey City, N. J.  
Revere Rubber Co., Boston-New York.  
Voorhees Rubber Mfg. Co., Jersey City.

## MECHANICAL GOODS.

Brushes.  
C. J. Bailey & Co., Boston.

### Buffers.

Boston Belting Co., Boston-New York.  
Canadian Rubber Co. of Montreal.  
Liverpool Rubber Co., Ltd., Liverpool.

### "Bull Dog" Packing.

Boston Woven Hose & Rubber Co.

### Card Cloths.

Canadian Rubber Co. of Montreal.  
Mechanical Fabric Co., Providence, R. I.

### Carriage Mats.

Boston Belting Co., Boston-New York.  
Boston Woven Hose & Rubber Co.  
Canadian Rubber Co. of Montreal.  
B. F. Goodrich Co., Akron, O.  
Home Rubber Co., Trenton, N. J.  
N. J. Car Spring & Rubber Co., Jersey City, N. J.  
Peerless Rubber Mfg. Co., New York.  
Voorhees Rubber Mfg. Co., Jersey City.

### Coin Mats.

Canadian Rubber Co. of Montreal.  
Faultless Rubber Co., Akron, Ohio.  
B. F. Goodrich Co., Akron, O.  
N. J. Car Spring & Rubber Co., Jersey City, N. J.  
New York Belting & Packing Co., N. Y.

### Cord (Pure Rubber).

Boston Belting Co., Boston-New York.  
Boston Woven Hose & Rubber Co.  
Cleveland Rubber Co., Cleveland, O.  
Davol Rubber Co., Providence, R. I.  
Empire Rubber Mfg. Co., Trenton, N. J.  
Home Rubber Co., Trenton, N. J.  
Manhattan Rubber Mfg. Co., New York.  
N. J. Car Spring & Rubber Co., Jersey City, N. J.  
New York Belting & Packing Co., N. Y.  
Peerless Rubber Mfg. Co., New York.  
Republic Rubber Co., Youngstown, Ohio.  
Revere Rubber Co., Boston-New York.  
Voorhees Rubber Mfg. Co., Jersey City.

## MECHANICAL GOODS.

### Deckle Straps.

Boston Belting Co., Boston.  
Liverpool Rubber Co., Liverpool, Eng.  
Mechanical Rubber Co., Chicago.  
New York Belting & Packing Co., N. Y.  
Republic Rubber Co., Youngstown, O.  
Revere Rubber Co., Boston-New York.

### "Dods" Packing.

Bowers Rubber Co., San Francisco, Cal.

### Door Springs.

Hodgman Rubber Co., New York.

### Dredging Sleeves.

Boston Belting Co., Boston-New York.  
Boston Woven Hose & Rubber Co.  
B. F. Goodrich Co., Akron, O.  
Home Rubber Co., Trenton, N. J.  
N. J. Car Spring & Rubber Co., Jersey City.  
Republic Rubber Co., Youngstown, O.

### Fleshing Bands.

Republic Rubber Co., Youngstown, O.

### Force Cups.

Hodgman Rubber Co., New York.

### "Forsyth" Combination Packing.

Boston Belting Co., Boston-New York.

### Fruit Jar Rings.

Boston Woven Hose & Rubber Co.  
Canadian Rubber Co. of Montreal.  
Cleveland Rubber Co., Cleveland, O.  
B. F. Goodrich Co., Akron, O.  
Empire Rubber Mfg. Co., Trenton, N. J.  
Eureka Rubber Mfg. Co. of Trenton.  
Manhattan Rubber Mfg. Co., New York.  
Republic Rubber Co., Youngstown, Ohio.  
New York Belting & Packing Co., N. Y.  
Whitman & Barnes Mfg. Co., Akron, O.

### Fuller Balls.

B. F. Goodrich Co., Akron, O.  
N. J. Car Spring & Rubber Co., Jersey City.



## RUBBER BUYERS' DIRECTORY—CONTINUED.

## MECHANICAL GOODS.

## Fuller Balls—Continued.

Peerless Rubber Mfg. Co., New York.  
Republic Rubber Co., Youngstown, O.  
Whitman & Barnes Mfg. Co., Akron, O.

## Gage Glass Washers.

Boston Belting Co., Boston, Mass.  
Canadian Rubber Co., Montreal.  
Cleveland Rubber Co., Cleveland, O.  
Empire Rubber Mfg. Co., Trenton, N. J.  
Eureka Rubber Mfg. Co., Trenton, N. J.  
B. F. Goodrich Co., Akron, O.  
Gutta Percha & Rubber Mfg. Co., N. Y.  
Gutta Percha and Rubber Mfg. Co. of Toronto.  
Home Rubber Co., Trenton, N. J.  
Manhattan Rubber Mfg. Co., New York.  
N. J. Car Spring & Rubber Co., Jersey City, N. J.  
New York Belting & Packing Co., N. Y.  
New York Rubber Co., New York.  
Revere Rubber Co., Boston, Mass.  
Jos. Stokes Rubber Co., Trenton, N. J.  
Voorhees Rubber Mfg. Co., Jersey City, N. J.

## Gas-Bags (Rubber).

Canadian Rubber Co., Montreal.  
Cleveland Rubber Co., Cleveland, O.  
Daval Rubber Co., Providence, R. I.  
B. F. Goodrich Co., Akron, O.  
Liverpool Rubber Co., Liverpool, Eng.  
N. J. Car Spring & Rubber Co., Jersey City, N. J.  
Peerless Rubber Mfg. Co., New York.  
Tyer Rubber Co., Andover, Mass.  
Voorhees Rubber Mfg. Co., Jersey City.

## Gasket Tubing.

Canadian Rubber Co., Montreal.  
Jenkins Bros., New York.

## Hat Bags.

Boston Belting Co., Boston.  
Canadian Rubber Co., Montreal.  
Home Rubber Co., Trenton, N. J.  
Manhattan Rubber Mfg. Co., New York.  
Mechanical Rubber Co., Chicago.  
N. J. Car Spring & Rubber Co., Jersey City, N. J.  
New York Belting & Packing Co., N. Y.  
New York Rubber Co., New York.  
Peerless Rubber Mfg. Co., New York.  
Republic Rubber Co., Youngstown, O.  
Revere Rubber Co., Boston.

## Horse Shoe Pads.

Canadian Rubber Co., Montreal.  
Home Rubber Co., Trenton, N. J.  
Peerless Rubber Mfg. Co., New York.  
Plymouth Rubber Co., Stoughton, Mass.  
Revere Rubber Co., Boston-New York.  
Voorhees Rubber Mfg. Co., Jersey City.  
Whitman & Barnes Mfg. Co., Akron, O.

## Hose—Armored.

## Hose—Wire Wound.

Boston Belting Co., Boston-New York.  
Boston Woven Hose & Rubber Co.  
Canadian Rubber Co., Montreal.  
B. F. Goodrich Co., Akron, O.  
N. J. Car Spring & Rubber Co., Jersey City.  
Peerless Rubber Mfg. Co., New York.  
Republic Rubber Co., Youngstown, O.  
Revere Rubber Co., Boston-New York.  
Voorhees Rubber Mfg. Co., Jersey City.

## Hose Couplings and Fittings.

Boston Woven Hose & Rubber Co.  
Canadian Rubber Co., Montreal.

## Hose Linings.

Boston Belting Co., Boston-New York.  
Boston Woven Hose & Rubber Co.  
Empire Rubber Mfg. Co., Trenton, N. J.  
Eureka Rubber Mfg. Co., Trenton, N. J.  
N. J. Car Spring & Rubber Co., Jersey City, N. J.  
Peerless Rubber Mfg. Co., New York.

## Hose—Protected.

Boston Belting Co., Boston-New York.  
Revere Rubber Co., Boston-New York.  
Voorhees Rubber Mfg. Co., Jersey City.

## Hose Racks and Reels.

Wray & Knox Mfg. Co., Philadelphia, Pa.

## Hose—Rubber Lined.

COTTON AND LINES.

Boston Belting Co., Boston-New York.  
Boston Woven Hose & Rubber Co.

## MECHANICAL GOODS.

## Hose—Rubber Lined.—Continued.

COTTON AND LINES.

Canadian Rubber Co., Montreal.  
Cleveland Rubber Co., Cleveland, O.  
Empire Rubber Mfg. Co., Trenton, N. J.  
Eureka Fire Hose Co., New York.  
Eureka Rubber Mfg. Co., Trenton.  
B. F. Goodrich Co., Akron, O.  
Gutta Percha & Rubber Mfg. Co., N. Y.  
Gutta Percha and Rubber Mfg. Co. of Toronto.  
Home Rubber Co., Trenton, N. J.  
Manhattan Rubber Mfg. Co., New York.  
N. J. Car Spring & Rubber Co., Jersey City, N. J.  
New York Belting & Packing Co., N. Y.  
Peerless Rubber Mfg. Co., New York.  
Republic Rubber Co., Youngstown, O.  
Revere Rubber Co., Boston.  
Jos. Stokes Rubber Co., Trenton, N. J.  
Voorhees Rubber Mfg. Co., Jersey City.  
Whitman & Barnes Mfg. Co., Akron, O.

## Hose—Submarine.

Boston Belting Co., Boston-New York.  
B. F. Goodrich Co., Akron, O.  
Republic Rubber Co., Youngstown, O.

## "Jenkins '96" Packing.

Jenkins Bros., New York.

## Lawn Sprinklers.

Boston Woven Hose & Rubber Co.  
Canadian Rubber Co., Montreal.

## Mallets (Rubber).

Boston Belting Co., Boston-New York.  
B. F. Goodrich Co., Akron, O.  
Peerless Rubber Mfg. Co., New York.  
Revere Rubber Co., Boston-New York.

## Mould Work.

[See Mechanical Rubber Goods.]  
Davidson Rubber Co., Boston.  
Daval Rubber Co., Providence, R. I.  
Faultless Rubber Co., Akron, O.  
Hardman Rubber Co., Belleville, N. J.  
Hodgman Rubber Co., New York.  
La Crosse (Wis.) Rubber Mills Co.  
Mattson Rubber Co., New York.  
Mitzel Rubber Co., Akron, O.  
National India Rubber Co., Bristol, R. I.  
Plymouth Rubber Co., Stoughton, Mass.  
Tyer Rubber Co., Andover, Mass.

## "Nubian" Packing.

Voorhees Rubber Mfg. Co., Jersey City

## Oil Well Supplies.

Boston Belting Co., Boston-New York.  
Boston Woven Hose & Rubber Co.  
B. F. Goodrich Co., Akron, O.  
Home Rubber Co., Trenton, N. J.  
Lake Shore Rubber Co., Erie, Pa.  
N. J. Car Spring & Rubber Co., Jersey City.  
Peerless Rubber Mfg. Co., New York.  
Republic Rubber Co., Youngstown, O.  
Revere Rubber Co., Boston-Pittsburgh.  
Voorhees Rubber Mfg. Co., Jersey City.  
Whitman & Barnes Mfg. Co., Akron, O.

## Paper Machine Rollers.

Boston Belting Co., Boston-New York.  
B. F. Goodrich Co., Akron, O.  
Republic Rubber Co., Youngstown, O.  
Revere Rubber Co., Boston-New York.  
Peerless Rubber Mfg. Co., New York.  
Voorhees Rubber Mfg. Co., Jersey City.

## "Perfection" Belting.

Boston Woven Hose & Rubber Co.

## Plumbers' Supplies.

Canadian Rubber Co., Montreal.  
B. F. Goodrich Co., Akron, O.  
Republic Rubber Co., Youngstown, O.

## Pump Valves.

[See Mechanical Rubber Goods.]

Jenkins Bros., New York.

## "Rainbow" Packing.

Peerless Rubber Mfg. Co., New York.

## Rings.

Boston Belting Co., Boston-New York.  
B. F. Goodrich Co., Akron, O.  
Peerless Rubber Mfg. Co., New York.  
Plymouth Rubber Co., Stoughton, Mass.  
Republic Rubber Co., Youngstown, O.

## MECHANICAL GOODS.

## Rollers—Rubber Covered.

Boston Belting Co., Boston.  
Canadian Rubber Co., Montreal.  
Cleveland Rubber Co., Cleveland, O.  
Empire Rubber Mfg. Co., Trenton, N. J.  
Eureka Rubber Mfg. Co. of Trenton.  
B. F. Goodrich Co., Akron, O.  
Home Rubber Co., Trenton, N. J.  
Manhattan Rubber Mfg. Co., New York.  
Mechanical Rubber Co., Chicago.  
N. J. Car Spring & Rubber Co., Jersey City, N. J.  
New York Belting & Packing Co., N. Y.  
Peerless Rubber Mfg. Co., New York.  
Plymouth Rubber Co., Stoughton, Mass.  
Republic Rubber Co., Youngstown, O.  
Revere Rubber Co., Boston-New York.

## Sewing Machine Rubbers.

B. F. Goodrich Co., Akron, O.

## Springs—Rubber.

Boston Belting Co., Boston-New York.  
Canadian Rubber Co., Montreal.  
B. F. Goodrich Co., Akron, O.  
Hardman Rubber Co., Belleville, N. J.  
Liverpool Rubber Co., Liverpool, Eng.  
N. J. Car Spring & Rubber Co., Jersey City.  
Peerless Rubber Mfg. Co., New York.  
Plymouth Rubber Co., Stoughton, Mass.  
Republic Rubber Co., Youngstown, Ohio.  
Revere Rubber Co., Boston-New York.  
Voorhees Rubber Mfg. Co., Jersey City.

## Stair Treads.

Boston Belting Co., Boston-New York.  
Boston Woven Hose & Rubber Co.  
Canadian Rubber Co., Montreal.  
Cleveland Rubber Co., Cleveland, O.  
Empire Rubber Mfg. Co., Trenton, N. J.  
Home Rubber Co., Trenton, N. J.  
Liverpool Rubber Co., Liverpool, Eng.  
Manhattan Rubber Mfg. Co., New York.  
N. J. Car Spring & Rubber Co., Jersey City, N. J.  
New York Belting & Packing Co., N. Y.  
New York Rubber Co., New York.  
Peerless Rubber Mfg. Co., New York.  
Republic Rubber Co., Youngstown, O.  
Revere Rubber Co., Boston-New York.  
Voorhees Rubber Mfg. Co., Jersey City.

## Thread.

Mechanical Fabric Co., Providence, R. I.  
Revere Rubber Co., Boston.

## Tiling.

Canadian Rubber Co., Montreal.  
B. F. Goodrich Co., Akron, O.  
Gutta Percha & Rubber Mfg. Co., N. Y.  
N. J. Car Spring & Rubber Co., Jersey City.  
New York Belting & Packing Co., N. Y.  
Peerless Rubber Mfg. Co., New York.  
Republic Rubber Co., Youngstown, Ohio.  
Voorhees Rubber Mfg. Co., Jersey City.

## Tires.

AUTOMOBILE, BICYCLE, AND CARRIAGE.  
Canadian Rubber Co., Montreal.  
Continental Caoutchouc & Gutta-percha Co., Hanover.  
Empire Rubber Mfg. Co., Trenton, N. J.  
B. F. Goodrich Co., Akron, O.  
Gutta Percha & Rubber Mfg. Co., Toronto.  
Kokomo Rubber Co., Kokomo, Ind.  
Lake Shore Rubber Co., Erie, Pa.  
Liverpool Rubber Co., Liverpool, Eng.  
North British Rubber Co., Ltd., Edinburgh.  
Plymouth Rubber Co., Stoughton, Mass.  
Republic Rubber Co., Youngstown, O.

AUTOMOBILE AND CARRIAGE.

Boston Belting Co., Boston-New York.  
Revere Rubber Co., Boston-New York.  
Eureka Rubber Mfg. Co., Trenton, N. J.

## Truck Bands.

Boston Belting Co., Boston.  
Cleveland Rubber Co., Cleveland, O.  
Empire Rubber Mfg. Co., Trenton, N. J.  
B. F. Goodrich Co., Akron, O.  
Home Rubber Co., Trenton, N. J.  
Manhattan Rubber Mfg. Co., New York.  
Mechanical Rubber Co., Chicago.  
N. J. Car Spring & Rubber Co., Jersey City, N. J.

## MECHANICAL GOODS.

## Truck Bands—Continued.

New York Belting & Packing Co., N. Y.  
Peerless Rubber Mfg. Co., New York.  
Republic Rubber Co., Youngstown, O.  
Voorhees Rubber Mfg. Co., Jersey City.  
Whitman & Barnes Mfg. Co., Akron, O.

## Tubing.

[See Mechanical Rubber Goods.]  
American Hard Rubber Co., New York.  
Davidson Rubber Co., Boston.  
Daval Rubber Co., Providence, R. I.  
Hardman Rubber Co., Belleville, N. J.  
Plymouth Rubber Co., Stoughton, Mass.  
Tyer Rubber Co., Andover, Mass.

## Tubing (Beer).

Boston Belting Co., Boston-New York.  
Boston Woven Hose & Rubber Co.  
Canadian Rubber Co., Montreal.  
Faultless Rubber Co., Akron, Ohio.  
B. F. Goodrich Co., Akron, O.  
Peerless Rubber Mfg. Co., New York.  
Plymouth Rubber Co., Stoughton, Mass.  
Republic Rubber Co., Youngstown, O.  
Voorhees Rubber Mfg. Co., Jersey City.

## "Usudurian" Packing.

Revere Rubber Co., Boston-New York.

## Valve Balls.

Boston Belting Co., Boston.  
Cleveland Rubber Co., Cleveland, O.  
Manhattan Rubber Mfg. Co., New York.  
Mechanical Rubber Co., Chicago.  
New York Belting & Packing Co., N. Y.  
New York Rubber Co., New York.  
Peerless Rubber Mfg. Co., New York.  
Republic Rubber Co., Youngstown, O.  
Whitman & Barnes Mfg. Co., Akron, O.

## Valve Discs.

American Hard Rubber Co., New York.  
Boston Belting Co., Boston-New York.  
B. F. Goodrich Co., Akron, O.  
Peerless Rubber Mfg. Co., New York.  
Republic Rubber Co., Youngstown, O.  
Revere Rubber Co., Boston-New York.

## Valves.

[See Mechanical Rubber Goods.]  
Jenkins Bros., New York-Chicago.  
Plymouth Rubber Co., Stoughton, Mass.

## Wringer Rolls.

Canadian Rubber Co., Montreal.  
Cleveland Rubber Co., Cleveland, O.  
B. F. Goodrich Co., Akron, O.  
Home Rubber Co., Trenton, N. J.  
Republic Rubber Co., Youngstown, O.

## DRUGGISTS' AND STATIONERS' SUNDRIES

## Atomizers.

## Bandages.

## Bulbs.

## Syringes.

## Water Bottles.

## Druggists' Sundries—General.

American Hard Rubber Co., New York.  
C. J. Bailey & Co., Boston.  
Geo. Borgfeldt & Co., New York.  
Canadian Rubber Co., Montreal.  
Cleveland Rubber Co., Cleveland, O.  
Davidson Rubber Co., Boston.  
Daval Rubber Co., Providence, R. I.  
Faultless Rubber Co., Akron, O.  
B. F. Goodrich Co., Akron, O.  
Hanover Rubber Co., Hanover, Germany.  
Hardman Rubber Co., Belleville, N. J.  
Hodgman Rubber Co., New York.  
Mitzel Rubber Co., Akron, O.  
North British Rubber Co., Ltd., Edinburgh.  
Tyer Rubber Co., Andover, Mass.

## Balls, Dolls and Toys.

Geo. Borgfeldt & Co., New York.  
Canadian Rubber Co., Montreal.  
Continental Caoutchouc & Gutta-percha Co.  
B. F. Goodrich Co., Akron, O.  
Hanover Rubber Co., Hanover, Germany.  
New York Rubber Co., New York.  
Whitman & Barnes Mfg. Co., Akron, O.



## RUBBER BUYERS' DIRECTORY—CONTINUED.

## DRUGGISTS' SUNDRIES

## Combs.

American Hard Rubber Co., New York  
Geo. Borgfeldt & Co., New York.  
Hanover Rubber Co., Hanover, Germany.

## Elastic Bands.

Canadian Rubber Co. of Montreal  
Davidson Rubber Co., Boston.  
Daval Rubber Co., Providence, R. I.  
B. F. Goodrich Co., Akron, O.  
Hodgman Rubber Co., New York-Boston.  
Tyer Rubber Co., Andover, Mass.  
Whitman & Barnes Mfg. Co., Akron, O.

## Erasive Rubbers.

Davidson Rubber Co., Boston.  
B. F. Goodrich Co., Akron, O.  
Hardman Rubber Co., Belleville, N. J.  
Mattson Rubber Co., New York.

## Finger Cots.

Faultless Rubber Mfg. Co., Akron, O.  
B. F. Goodrich Co., Akron, O.  
Pure Gum Specialty Co., Barberton, O.

## Gloves.

Canadian Rubber Co. of Montreal.  
Daval Rubber Co., Providence, R. I.  
Faultless Rubber Co., Akron, O.  
B. F. Goodrich Co., Akron, O.  
Pure Gum Specialty Co., Barberton, O.

## Hard Rubber Goods.

American Hard Rubber Co., New York.  
Geo. Borgfeldt & Co., New York.  
Canadian Rubber Co. of Montreal.  
Daval Rubber Co., Providence, R. I.  
Hanover Rubber Co., Hanover, Germany.  
Hardman Rubber Co., Belleville, N. J.  
Stokes Rubber Co., Joseph, Trenton, N. J.  
Tyer Rubber Co., Andover, Mass.

## Hospital Sheetings.

Cleveland Rubber Co., Cleveland, O.  
Davidson Rubber Co., Boston.  
Daval Rubber Co., Providence, R. I.  
Hodgman Rubber Co., New York.  
Plymouth Rubber Co., Stoughton, Mass.  
Tyer Rubber Co., Andover, Mass.

## Hot Water Bottles.

[See Water Bottles.]

## Ice Bags and Ice Caps.

Faultless Rubber Co., Akron, Ohio.  
B. F. Goodrich Co., Akron, O.  
Hardman Rubber Co., Belleville, N. J.  
Pure Gum Specialty Co., Barberton, O.  
Tyer Rubber Co., Andover, Mass.

## Life Preservers.

Hodgman Rubber Co., New York.

## Nipples.

Canadian Rubber Co. of Montreal.  
Cleveland Rubber Co., Cleveland, O.  
Davidson Rubber Co., Boston.  
Daval Rubber Co., Providence, R. I.  
Faultless Rubber Co., Akron, O.  
B. F. Goodrich Co., Akron, O.  
Pure Gum Specialty Co., Barberton, O.  
Tyer Rubber Co., Andover, Mass.

## Sponges (Rubber).

Faultless Rubber Co., Ashland, Ohio.  
B. F. Goodrich Co., Akron, O.

## Stationers' Sundries.

American Hard Rubber Co., New York.  
Geo. Borgfeldt & Co., New York.  
Canadian Rubber Co. of Montreal.  
Cleveland Rubber Co., Cleveland, O.  
Davidson Rubber Co., Boston.  
Daval Rubber Co., Providence, R. I.  
B. F. Goodrich Co., Akron, O.  
Hanover Rubber Co., Hanover, Germany.  
Hardman Rubber Co., Belleville, N. J.  
Hodgman Rubber Co., New York-Boston.  
Tyer Rubber Co., Andover, Mass.

## Stopples (Rubber).

Cleveland Rubber Co., Cleveland, O.  
Daval Rubber Co., Providence, R. I.  
Hodgman Rubber Co., New York.  
Manhattan Rubber Mfg. Co., New York.  
New York Belting & Packing Co., N. Y.  
Tyer Rubber Co., Andover, Mass.  
Whitman & Barnes Mfg. Co., Akron, O.

## DRUGGISTS' SUNDRIES.

## Throat Bags.

Cleveland Rubber Co., Cleveland, O.  
Daval Rubber Co., Providence, R. I.  
B. F. Goodrich Co., Akron, O.  
Tyer Rubber Co., Andover, Mass.

## Tobacco Pouches.

Canadian Rubber Co. of Montreal.  
Faultless Rubber Co., Akron, Ohio.  
B. F. Goodrich Co., Akron, O.  
Pure Gum Specialty Co., Barberton, O.  
Tyer Rubber Co., Andover, Mass.

MACKINTOSHED  
AND SURFACE  
GOODS

## Air Goods (Rubber).

Canadian Rubber Co. of Montreal.  
Cleveland Rubber Co., Cleveland, O.  
Daval Rubber Co., Providence, R. I.  
B. F. Goodrich Co., Akron, O.  
Hodgman Rubber Co., New York.  
New York Rubber Co., New York.  
National India Rubber Co., Providence.  
Tyer Rubber Co., Andover, Mass.

## Air Mattresses.

Canadian Rubber Co. of Montreal.  
Mechanical Fabric Co., Providence, R. I.

## Barbers' Bibs.

Daval Rubber Co., Providence, R. I.  
Tyer Rubber Co., Andover, Mass.

## Bathing Caps.

Daval Rubber Co., Providence, R. I.  
B. F. Goodrich Co., Akron, O.

## Bellows Cloths.

Boston Rubber Co., Boston.  
Cleveland Rubber Co., Cleveland, O.  
Hodgman Rubber Co., New York.  
La Crosse (Wis.) Rubber Mills Co.

## Calendering.

La Crosse (Wis.) Rubber Mills Co.  
Milford Rubber Co., Boston.  
Plymouth Rubber Co., Stoughton, Mass.

## Carriage Ducks and Drills.

Cleveland Rubber Co., Cleveland, O.  
Empire Rubber Mfg. Co., Trenton, N. J.  
Kureka Rubber Mfg. Co. of Trenton.  
Gutta Percha & Rubber Mfg. Co., Toronto.

## Clothing.

Apsley Rubber Co., Hudson, Mass.  
Canadian Rubber Co. of Montreal.  
Cleveland Rubber Co., Cleveland, O.  
Granby Rubber Co., Granby, Quebec.  
Gutta Percha & Rubber Mfg. Co. of Toronto.  
Hodgman Rubber Co., New York.  
La Crosse (Wis.) Rubber Mills Co.  
Mann Summer Clothing Co., New York.  
North British Rubber Co., Ltd., Edinburgh.

## Cravenette.

Cravenette Co., Ltd.

## Diving Dresses.

Hodgman Rubber Co., New York.

## Dress Shields.

Hodgman Rubber Co., New York.  
Mattson Rubber Co., New York.

## Horse Covers.

Hodgman Rubber Co., New York.

## Leggings.

Cleveland Rubber Co., Cleveland, O.  
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## Rubber Coated Cloths.

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Hood Rubber Co., Boston.  
Liverpool Rubber Co., Liverpool, Eng.  
Lycorning Rubber Co., Williamsport, Pa.  
Meyer Rubber Co., New York.  
National India Rubber Co., Boston.  
North British Rubber Co., Ltd., Edinburgh.  
United States Rubber Co., New York.  
Wales-Goodyear Rubber Co., Boston.  
Woonsocket Rubber Co., Providence.

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Canadian Rubber Co. of Montreal.  
Continental Caoutchouc & Guttapercha Co., Hanover.  
Plymouth Rubber Co., Stoughton, Mass.

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Granby Rubber Co., Granby, Quebec.  
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## Wading Pants.

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GOODS

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B. F. Goodrich Co., Akron, O.  
Hodgman Rubber Co., New York.

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Canadian Rubber Co. of Montreal.  
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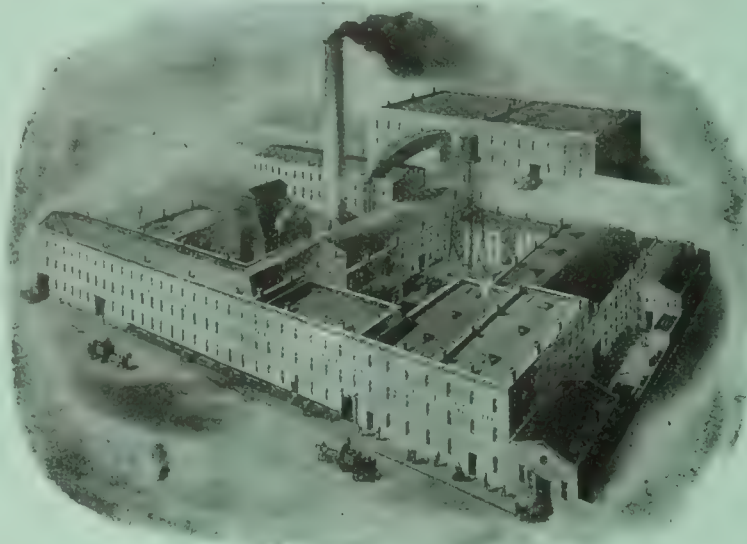


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APRIL 1, 1905.

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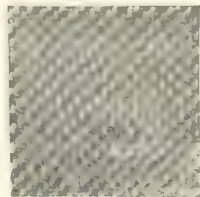
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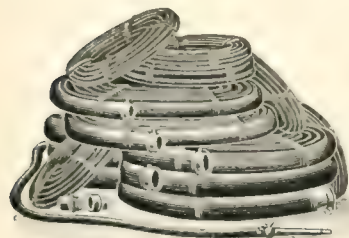


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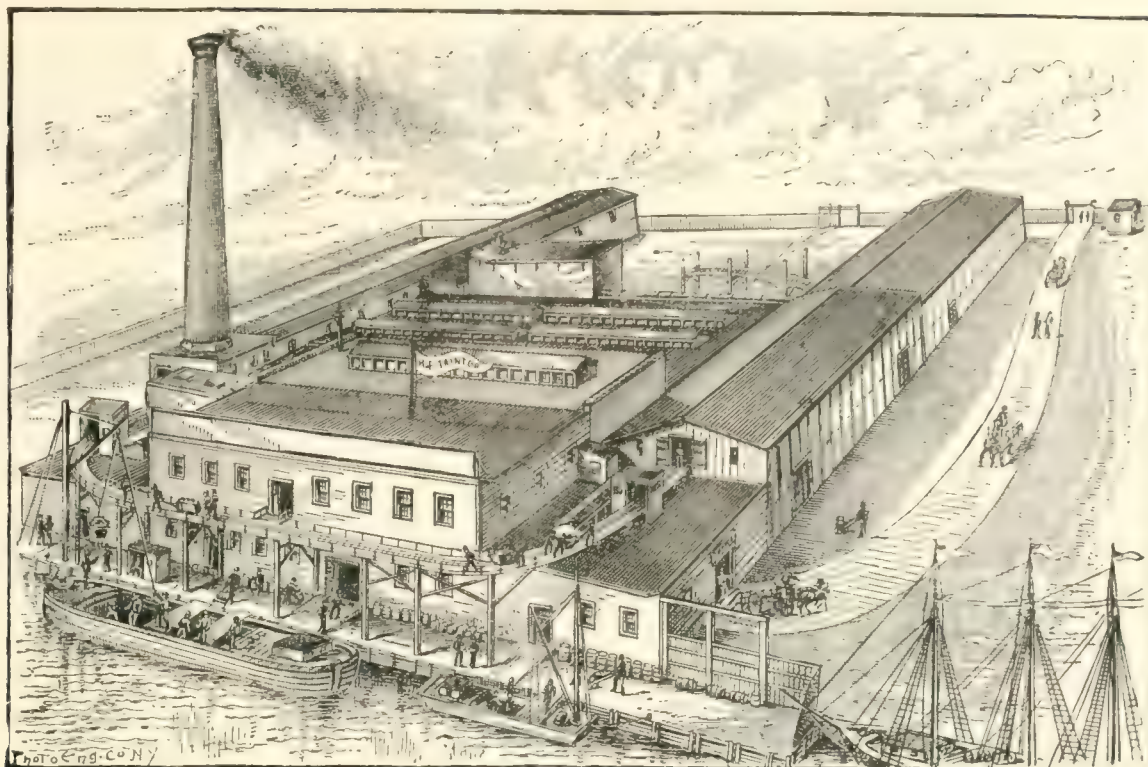
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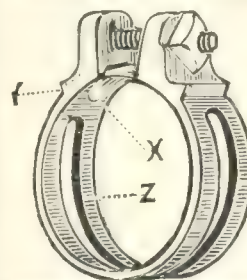
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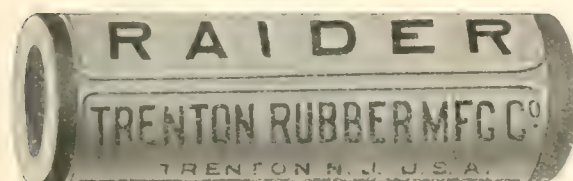
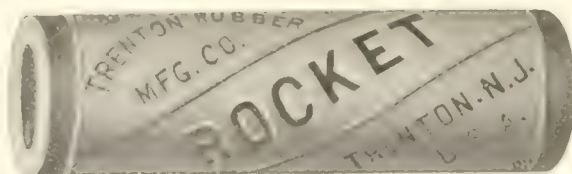
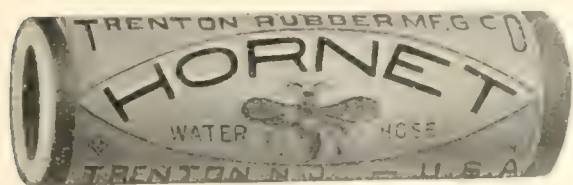
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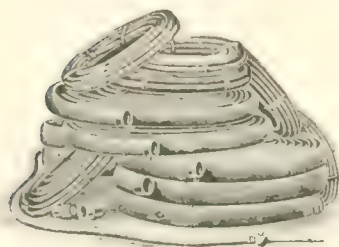
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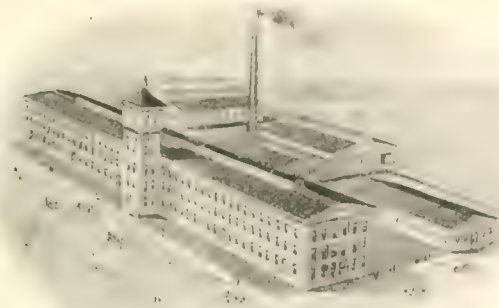
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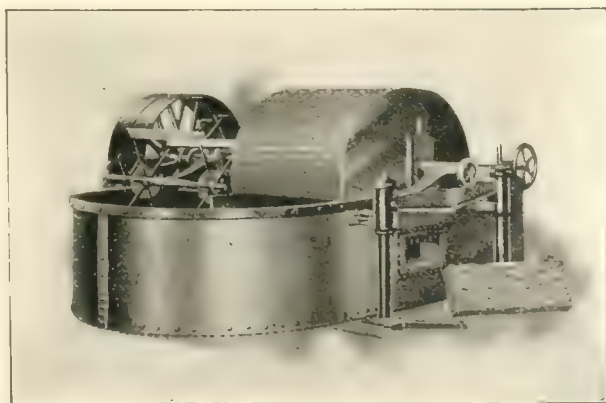
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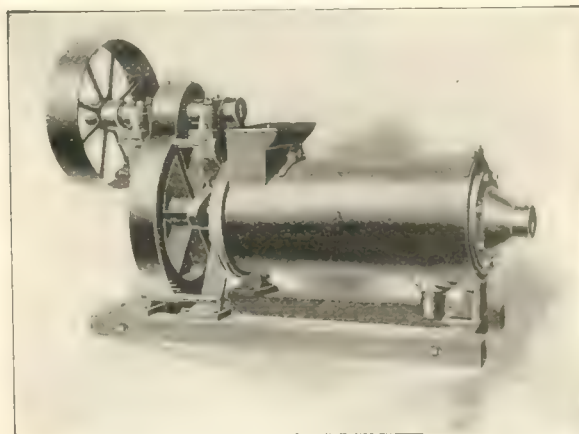
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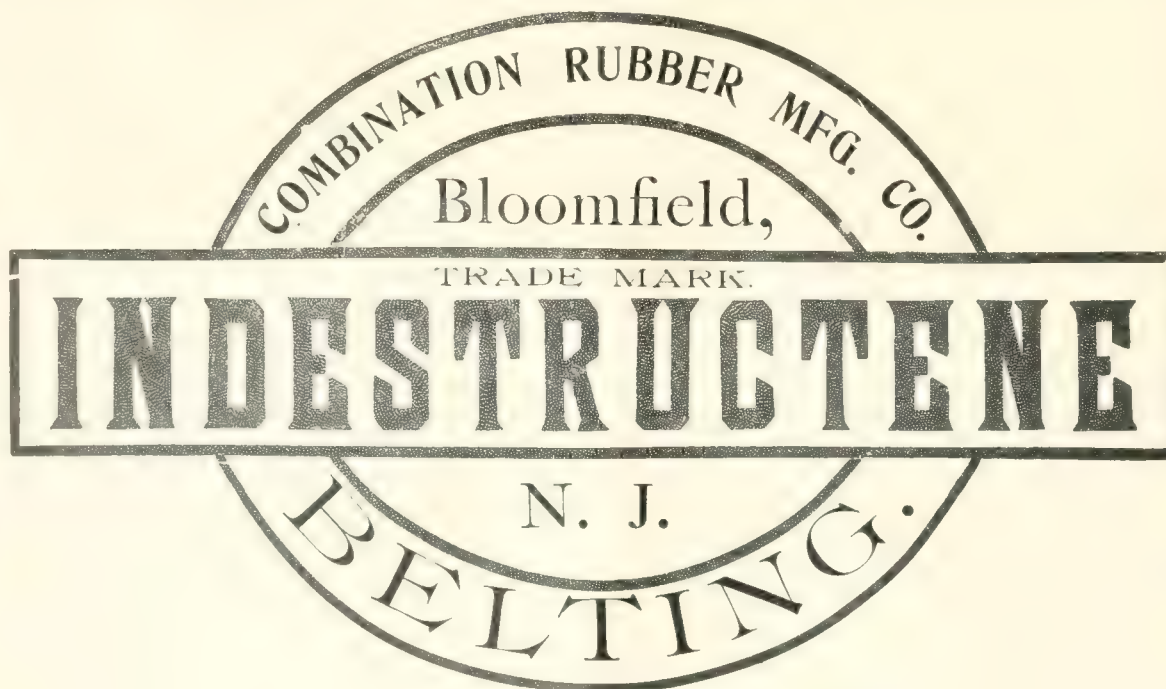
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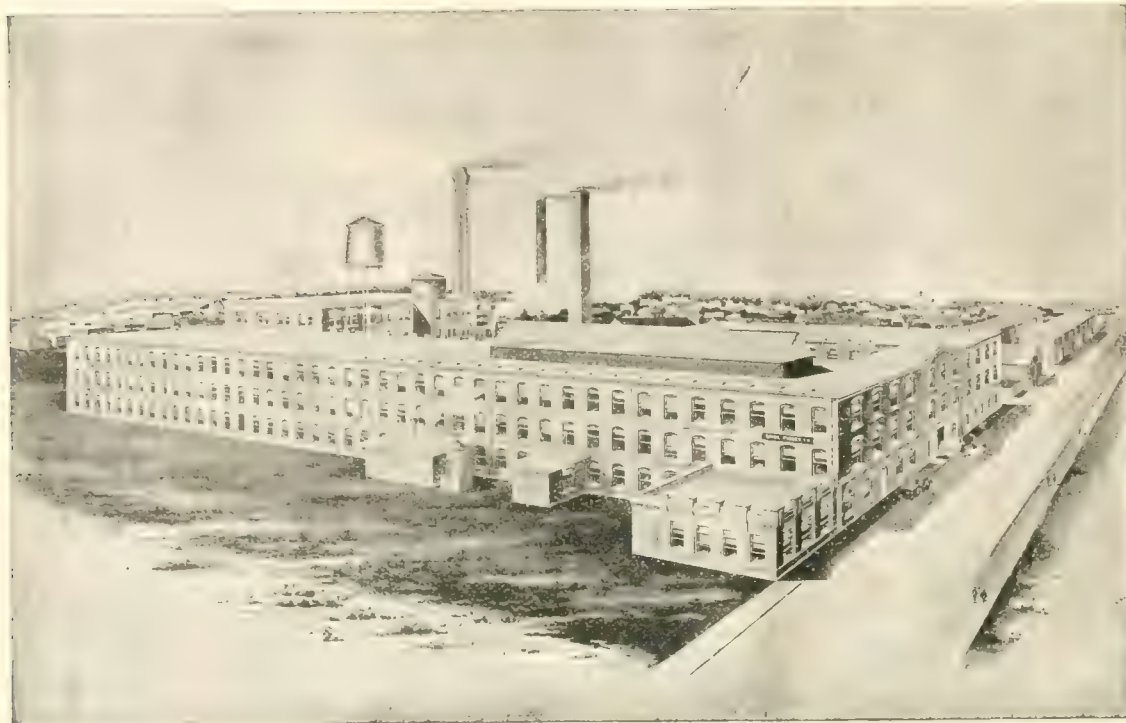
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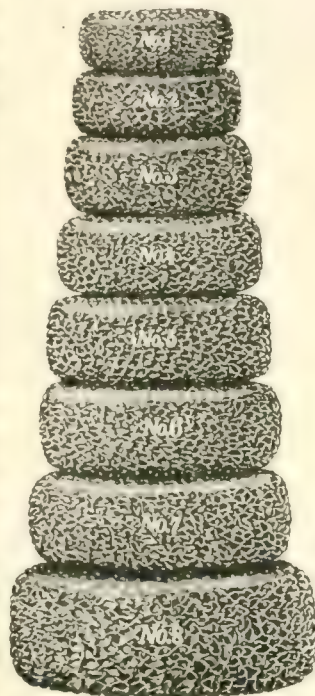
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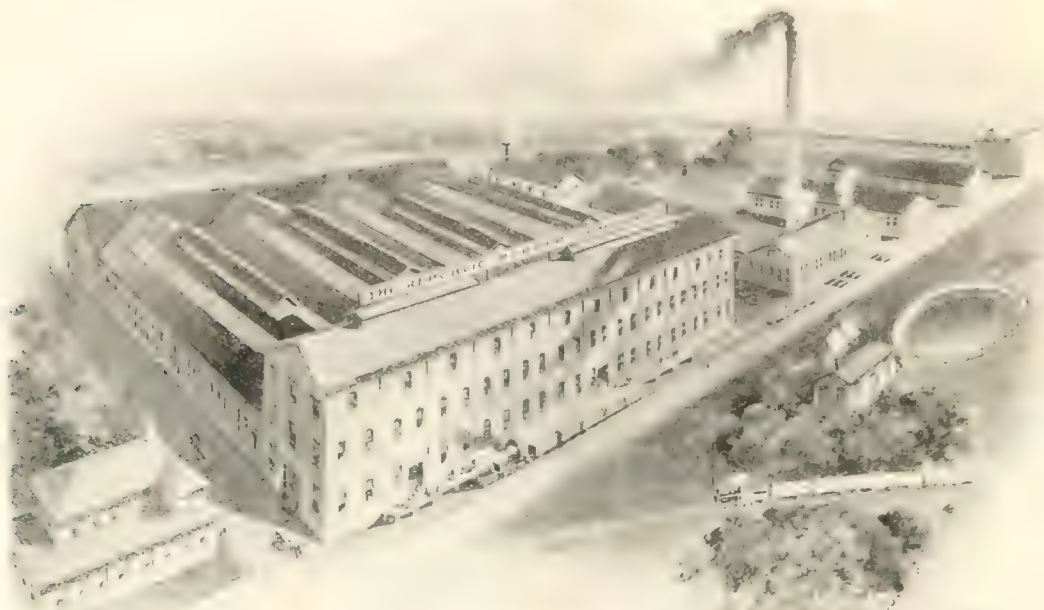
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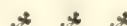
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## TWO DOLLAR RUBBER.

IF Pará rubber should reach \$2 a pound, and other grades should show a proportionate rise, what would happen to the trade? Taking it for granted that the increased cost was due wholly to the operation of the laws of supply and demand, and not in any sense to speculation, the situation would not be so complex. Certain it is that the rubber manufacture would not cease. Back in 1882, with Pará rubber at \$1.25—then an extremely high price—under the manipulation of Vianna, certain of the large consumers, notably those who made rubber footwear, shut down, but the condition of extreme prices was only temporary, and at the time there was not a pressure of orders for goods.

But taken in the broad sense, India-rubber has become one of the necessities of civilization, and rubber goods will be in demand, no matter what the raw material may cost. Suppose it should become necessary to add 10, 15, or even 20 cents to the first cost of a pair of rubber shoes, would not most of us buy them in slushy weather just the same? If the cost of the automobile tire was advanced 20 per cent. because of \$2 rubber it would not go out of use—the purchaser would growl more and pay more.

To multiply such instances would be easy, but needless. It is enough to say that the rubber business would go on, and on a large scale. In certain cases, of course, there would be substitution of other goods for those made of or containing rubber, but that would affect only a small proportion of the business. Rubber is used generally where it is the best material for the purpose, and often where it is the only material in existence that meets the requirements.

Certain of the manufacturers of rubber goods would undoubtedly suffer, during the period of adjustment of prices to a \$2 level. Some caught by contracts or speculating on a sudden drop in price might be crowded to the wall, but the great elastic trade would ultimately adjust itself to the high level, just as it has adjusted itself gradually to the successive increases in cost of Pará rubber from 25 cents a pound to the figures now prevailing. To some people connected with the trade \$2 rubber would even prove a boon. The reclaimers, for example—how busy they would be, and under the stimulus of greater demand, what new grades of "pure gum" might they not turn out?

Then what an impulse would be given to rubber planting. How long would it be before the 20,000,000 planted Pará rubber trees in the Far East would increase to 100,000,000? The destruction of the native rubber supplies, already proceeding so rapidly in many districts, would find a new excuse. In the face of \$2 a pound at New York, what governmental restriction, in sparsely settled tropical countries, would long prove a barrier to reckless robbery of the forests?

Such speculation may seem idle. Or is there a suggestion in them that higher prices for manufactured goods have got to come? Why not begin to work up toward the \$2 level and average up for the sacrifices that high rubber, high cotton, and low prices for goods of the past year have entailed.



## A LORD OF THE RUBBER FOREST.

WE doubt if a more picturesque figure exists in the world's commerce to-day than is portrayed in word and picture, on another page of this issue, by a correspondent of THE INDIA RUBBER WORLD who has lately visited the rubber territory of that strangely remote country, Bolivia. The fact of rubber being a "necessity of civilization" could not be more strongly emphasized than by its being drawn from the forests above the falls of the Madeira, in the face of such difficulties as have to be overcome in trading of whatever kind in that region.

As for the central personage involved in the Upper Madeira river rubber trade, it is probable that his counterpart is nowhere else to be found—either in rubber or any other business. The feudal system which flourished in Europe in the "middle ages," after having been abolished in China before the Christian era, is in full sway at this moment in one of the American republics—for the reason that the world must have rubber from the region referred to, and that rubber cannot be obtained under any other industrial system yet applicable to that little developed spot on the globe. After Nicolas Suarez a new *régime* may prevail there, but then the pressure of outside conditions will have become more intense, and rubber can be gained from north-eastern Bolivia without the agency of such an absolute lord of the forest as is now the self appointed representative of law and order at Cachuela Esperanza.

It may not matter greatly to the consumer of Bolivian rubber under what circumstances or by whom it is produced—so long as all consumers obtain it under like conditions. None the less the study of the conditions which have produced Nicolas Suarez and made him predominant over an area of thousands of square miles is of interest, for the reason that it throws a veritable searchlight upon the question why rubber from the Amazon valley costs the consumer so much. And it illuminates another point: why companies formed in Europe and the United States do not succeed better in exploiting rubber in the Amazon wilds. What American would deliberately step into the shoes of the subject of Mr. Post's sketch to control his force of Indian rubber gatherers?

## THE GREAT NEW USE OF RUBBER.

THE details which appear elsewhere in this issue regarding the exports of automobiles and accessories from the leading countries having a share in this trade are alone enough to indicate a large demand for vehicles of this class. But when it is considered that not more than 2 per cent. of the automobiles purchased in the United States last year figured in international trade, and that in several other countries the domestic production of such vehicles was very much larger than the number imported, the total volume of the motor car business will be seen to have assumed vast proportions. The demand which this comparatively new trade has made already upon the limited supplies of rubber is enough to have influenced seriously the cost of this commodity.

But it is possible that within a few years we shall be looking back with an appreciation that the motor car business in 1905 was merely in its infancy. Following the details which we give on another page of the automobile trade already established is a reference to the prospect that the horsedrawn omnibuses which so long have been a marked feature in street traffic in London may shortly be supplanted by "motor 'buses," every one of which is at present intended to be equipped with expensive rubber tires. The number of 'buses of the type now in use has been estimated as high as 20,000, and if half this number of motor cars should be introduced on London streets within the next few years, the requirements in rubber from this new quarter alone would be enough to prevent any material decline in rubber prices.

London, however, is not the only city in the world destined to be supplied with motor 'buses in case the experiment now being made there should prove successful. All the large provincial cities in the United Kingdom may be expected to follow the example of the metropolis, to say nothing of very many other cities, in many countries, where the electric street railway system of American towns, large and small, has not yet become established. Indeed, it is possible that the extension of street railway systems may receive a check, at least until there has been an opportunity for a fair test of the relative efficiency of the system now being introduced on so extensive a scale in London.

THE INDIA RUBBER WORLD has more than once referred to the development of the commercial motor car—in whatever shape—as a matter of more importance to the rubber tire trade than that of automobiles for private use, and the new London passenger service now being inaugurated seems to confirm this impression. The public passenger vehicle belongs to this class, and it must, for some time to come, be equipped with rubber tires, even if the horseless freight wagon, now coming into rapidly increased use, should finally be developed in the direction of not requiring an equipment of rubber.

A NEW FEATURE IN REVENUE RETURNS appears in a late newspaper from the Amazon. Statements of revenues actually collected we are all familiar with, and estimates of revenues expected during given periods to come. Then there are tables of due and uncollected taxes, but this report from the Amazon is different from all: it is a detailed statement of what "might have been," so to speak. Here are the figures:

From the first to the 27th of last month [January] there were exported from the port of Manáos, coming from the three departments of the federal territory of Acre, 1,140,128 kilos of India-rubber, officially valued at 6,639:812\$761. Loss of the state of Amazonas in taxes, distributed as follows:

State taxes, 20 per cent. ....	1,347 : 062\$552
Municipal taxes, 2.26 per cent. ....	149 : 939\$768
Amazonense Bank, 100 reis. ....	108 : 129\$840

Total. .... 1,606 : 032\$160

Expressed in terms of United States money, this "loss" amounted to more than \$400,000, and in less than one month. At the same rate for a year one would think that the state would be threatened with bankruptcy. What really is meant is that if the district referred to were considered as part of the

Amazonas, instead of being governed as a federal territory, the state might levy taxes as above stated. But why estimate the losses so moderately? Why not figure out what the loss would be with state taxes at 40 or 50 per cent? What would it be with rubber shipments twice as great? What does Manáos "lose" by not being able to tax the whole earth?

### THE RUBBER TRADE IN UTOPIA.

"WHAT are your discounts?" asked the buyer, after showing the manufacturer a big order for rubber goods.

"Ten off list" was the firm reply.

"Ten off!" gasped the questioner. "Ten off! Why my last big order given to ——— & Co. called for 80 & 10 & 10 & 5 & 2½. Are you crazy?"

"Sane for the first time in many years" replied the other, "and you will find all the rest of the manufacturers in this line just the same. You see, rubber went up so high, and there were so many discounts and concessions and allowances of various sorts that we were all losing money, so we got together in an association and revised the whole business and put it on a basis that is fair to all, and—"

"But how about terms? You will date these bills September, won't you?" interrupted the other.

Slowly and pityingly the manufacturer shook his head.

"That is all a thing of the past, no one does it now. Cash ten days are our terms; all claims for defective goods settled by an arbitrating board within ten days after receipt of goods. No price cutting for any reason."

"How does the ambitious man build up a bigger business than his easy going rival under the system?"

"Originality, skill, and hustle, are just as much in demand as ever and just as valuable," was the reply.

"And is the trade prosperous?"

"Never more so and full of respect for itself; indeed its example is doing much for the industrial world at large. There had been those who claimed that commercial honor was getting to be a thing of the past, but now the friends of honesty are jubilant."

"Happy, happy rubber trade!" exclaimed the jobber.

### OFFICIAL VISIT TO RUBBER PLANTATIONS.

IT will be recalled by readers of this Journal that about a year ago a report issued through the United States consular service and signed by Mr. Conley, deputy and vice consul general at Mexico City, referred to the American plantation companies operating in Mexico in terms which to say the least were not commendatory. Since the appearance of that report it is understood that Mr. Conley's connection with the consulate general has terminated, and from time to time intimations have become public that the head of the office—who was absent on leave from his post at the date of publication of the report—Mr. James Ross Parsons, Jr., would undertake a tour of observation through the planting districts. The *Mexican Herald* of March 14 chronicles the return to his post of Consul General Parsons, after a five weeks' trip in southern Mexico which involved more than 2000 miles of travel, including several hundred miles on horseback and on foot. He journeyed also on hand cars, as well as on railway trains, and spent many days in canoes and steamers on the rivers of Tabasco and Vera Cruz. The *Herald* states that Mr. Parsons crossed the isthmus of Tehuantepec and visited not only many American plantations, but also a number of *fincas* of Mexican planters which have been seen by comparatively few Americans. The *Herald's*

report concludes: "Mr. Parsons would not give his impressions of American tropical enterprises, saying that he was required to transmit his report to the department of state [at Washington] for such disposition as the department saw fit to make of it."

### "GUAYULE" EXPLOITATION.

THE company L'Anglo-Mexicana, operating at San Luis Potosi, has transferred its "Guayule" rubber business to the newly formed Compañía Explotadora de Caucho Mexicano. This company is that referred to in THE INDIA RUBBER WORLD last month [page 183] as having been formed in Europe to exploit the rubber shrub in question. The company has offices in Mexico; the European headquarters, at 36, Fenchurch street, London, are in charge of Messrs. Landauer & Co.—The Torreón (Mexico) *Enterprise* mentions that extensive additions are being made to the Jimulco factory of the company referred to above.

### THE CABLE SERVICE ON THE AMAZON.

A RECENT issue of *Folha do Norte* (Para, Brazil), contained some severe strictures upon the alleged negligence in the cable service on the Amazon operated by the Amazon Telegraph Co., Limited. As an illustration of the unsatisfactory condition of the service, mention was made of the filing of dispatches by the Pará correspondent of a Manáos newspaper early one morning, followed by a notification to the correspondent at night: "Owing to the interruption of the cable service to Manáos it has been impossible to transmit your message." The Pará newspaper adds: "Silence is carefully preserved in regard to the hour at which the interruption occurred. All this furnishes proof of the miserable inefficiency of the service."

A later issue of *Folha do Norte*, however, states: "The Amazon Telegraph Co. has ordered a new cable extension to be used in Amazonas, and expects to receive it shortly. This cable is destined to restore the other branches of its expensive lines and to improve as much as possible the electrical conditions of the line between Belem [Pará] and Manáos, thus instituting a constant and regular service between the two cities of Amazonia."

### INDIA-RUBBER GOODS IN COMMERCE.

#### EXPORTS FROM THE UNITED STATES.

OFFICIAL statement of values of exports of manufactures of India-rubber and Gutta-percha, for January, 1905, and the first seven months of five fiscal years, beginning July 1, from the treasury department at Washington:

MONTHS.	Belting, Packing, and Hose.	Boots and Shoes.	All other Rubber.	TOTAL.
January, 1905.....	\$ 79,701	\$102,965	\$ 201,262	\$ 374,928
July-December.....	459,837	868,296	1,136,906	2,465,039
Total.....	\$530,538	\$971,261	\$1,338,168	\$2,839,967
Total, 1903 04.....	530,805	828,645	1,401,255	2,760,705
Total, 1902 03.....	467,156	874,830	1,229,405	2,571,391
Total, 1901 02.....	355,509	833,034	940,373	2,129,806
Total, 1900 01.....	304,762	587,687	963,740	1,856,189

ITALY.—Official returns of values of rubber goods in foreign commerce, converting the *lira* at 19.3 American cents:

	1902.	1903.
Imports.....	\$3,680,637	\$4,095,351
Exports.....	1,858,321	1,861,816



## LITERATURE OF INDIA-RUBBER.

A RECENT issue of the Journal of the Royal Botanic Gardens of Ceylon (Vol. II—No. 29, January, 1905) consists of a report on "Canker (*Nectria*) of Pará Rubber," by Mr. J. B. Carruthers, who until recently was the government mycologist for Ceylon, and whose valuable work in the study of the Pará rubber tree disease has already been mentioned at length in THE INDIA RUBBER WORLD. This pamphlet goes into detail in regard to the nature and effects of the canker fungus and its eradication, and the tone of the report is altogether hopeful. A concluding paragraph is quoted here:

I would like in closing this account of my work in connection with the rubber canker to express my indebtedness to many rubber planters for valuable help cordially given. The rubber planter, perhaps because he is a more modern creation, deals with his cultivation rather more in an experimental scientific manner than his brother planter in tea or cacao. He is not trammelled by any traditions as to methods of cultivation, and has to get his knowledge first hand. This necessitates a greater amount of observation of the trees in his care both as regards their freedom from disease and their production of *latex*. The practical and efficient treatment of the canker fungus may therefore, I think, be left in his hands with the assurance that he will not allow it to get the better of him while any efforts on his part can ensure its eradication.

THE *Tropical Agriculturist* (Colombo), now in the twenty-fourth year of its success as a promoter and record of planting in the tropics—during all of which time it has encouraged the culture of India-rubber—has become the organ of the recently organized Ceylon Agricultural Society, and placed under the editorial control of Dr. John C. Willis, the able director of the royal botanic gardens at Peradeniya. The magazine will continue to be published by the Messrs. Ferguson, the founders, and for the present some of the old features will be retained, but it is intimated that by the end of the current volume a general transformation of the periodical may take place.

## IN CURRENT PERIODICALS.

CAOUTCHOUC des Herbes. [Extensive notes from various sources on the species yielding "root rubber," their *habitat*, methods of exploitation, profits, etc.]—*Journal d'Agriculture Tropicale*, Paris. V-44 (February 28, 1905). Pp. 35-38.

A Manicoba em Nosso Estado. [Favorable report on Manicoba (Ceara rubber) in the state of Santa Catharina, Brazil.]—*Revista Agrícola*, Florianopolis. I 1 (January, 1905). Pp. 9-11.

Vorschläge betreffs der Ausbeutung der wilden *Kickxia*-Bestände in Kamerun. (Propositions regarding the exploitation of wild *Kickxia* in Kamerun). By Freiherr von Stein. [Suggestions regarding the best method of obtaining rubber from *Kickxia*; proposed ordinance for abolishing the practical extraction of rubber, and providing for the replanting of this species in southern Kamerun.]—*Der Tropenpflanzer*, Berlin. VIII-11 (November, 1904). Pp. 597-611. [Summary].—*Journal d'Agriculture Tropicale*, Paris. V-44 (February 28, 1905). Pp. 45-47.

## OTHER BOOKS RECEIVED.

FRICITION AND LUBRICATION. A HANDBOOK FOR ENGINEERS, Mechanics, Superintendents, and Managers. By William M. Davis. Illustrated. Second edition. Pittsburgh: The Lubrication Publishing Co., 1904. [Cloth, 1000 Pp.; Price, \$2.]

THE author, a member of various associations of engineers, and claiming years of experience as an engineer, reveals his practical disposition by stating in his preface his acknowledgments to a professional author in helping him to put his book in shape, and to a librarian for assistance in collecting data from books under the latter's charge. No claim is made to originality, but only to bringing together in compact shape matters calculated to be of value to his readers for daily reference in their work. The subjects treated are friction of engines and machines, lubrication, oils, greases, and related matters, in con-

nection with which 69 illustrations are distributed through the text. Such a work cannot fail to be of value in a rubber factory, no less than in textile mills and other establishments mentioned by the author, although the rubber industry is not definitely referred to. A few pages are devoted to "Friction Loss of Piston Rod Packing," the results being given of an exhaustive series of tests with various forms of packings by Professor C. H. Benjamin. [See THE INDIA RUBBER WORLD, March 1, 1900—page 155.]

"THE ELECTRICIAN" ELECTRICAL TRADES DIRECTORY AND Handbook for 1905. (Twenty-third year.) London: The Electrician Printing and Publishing Co., Limited, 1905. [Two vols. Cloth. 8vo. Pp. 1628+ cxxxvi; folding charts. Price, 15 shillings.]

THIS admirably edited annual compilation appears every year in larger volume, both on account of the broadening field of the electrical industries and of the frequent addition of new features of value and interest for reference for all who are interested in these industries. For instance, the current issue contains no little matter in relation to electric traction in London, and notes on progress in wireless telegraphy in general. It is in the fullest sense an international work, "American Electrical Fire Risk Rules" being given equal prominence with "Telephonic Facilities between Great Britain and the Continent." The "Biographical Section" notes impartially the leaders in electrical science in every country, and the directories of firms and individuals and governmental services cover the whole world. It is interesting to note that the publisher in his preface predicts that the development of the electrical power section of the industry is that to which the trade must look for its greatest extension in the immediate future. The "Directory" related mainly in the earlier years to the field of electrical communications, to which later was added lighting facilities, and now is foreshadowed what may ultimately be the greatest of all electrical fields—the commercial transmission of power—which will require a still further augmentation of the scope of this work.

KOLONIAL-HANDELS-ADRESSBUCH. 1905 (9 JAHRGANG). BERLIN: Kolonial Wirtschaftlichen Komitee. 1905. [Paper. 8 vo. Pp. 242; map. Price, 1.50 marks.]

THIS annual colonial commercial directory, devoted to the German possessions over seas, is the completest publication of the kind obtainable with relation to colonial enterprises and interests of any country, giving as it does the home and colonial addresses and other details concerning companies and firms engaged in all branches of business, industry, and planting in which the Germans have become interested in their colonies. The issue of such a work alone affords strong testimony of the practical character of the work being done by the important German colonial committee.

## LABOR CONDITIONS IN THE ACRE.

THE prefect of Acre has published a proclamation to the effect that all *seringueiros* (rubber gatherers) who henceforth "irregularly" leave their employers with the intention of not paying the debts they have contracted, will be visited with the penalty of the law, and it is recommended that no *patroes* (patrons) allow in their *seringais* (rubber fields) any former laborers of other employers guilty of such fault. This would indicate that conditions are becoming more "settled" in the rubber district so long in dispute between Bolivia and Brazil, and now administered by the latter. It appears that it is only by means of being able to enforce claims for debt, and then keeping the rubber workers perpetually in debt to them, that the *patroes* can ever be assured of having a working force. The failures of Europeans in this field doubtless are due to their inability to adapt themselves to the peculiar labor conditions.

## NICOLAS SUAREZ, A SOUTH AMERICAN RUBBER BARON.

By Charles Johnson Post.

ALMOST in the very heart of unexplored South America, at the upper end of the Falls of the Madeira—by the side of the "Cachuela Esperanza,"\* in fact—there stands a little marble shaft enclosed by a rusty and broken iron fence. The space within is overgrown with weeds and creepers that, in these tropics, spring up in a night, and between the cracks of the poorly laid cement lizards dart in and out. Somewhere hidden in the growth about the base is the inscription: "IN LOVING MEMORY OF THE WIFE OF NICOLAS SUAREZ." It stands alone on a little rocky eminence above the cataract, and within the roar of its beaten waters. It is pathetic in its desolation; it looks shabby, and seems neglected; but when you realize that it has meant the labor of scores of Indians for many months dragging the great weight of the marble blocks around the eighteen portages of the falls, that the nearest outpost of civilization is a thousand miles away, and that, measured by the standard of money alone it to-day represents its weight in silver bullion, then you recognize the real dignity of the tribute. This is the work of Nicolas Suarez, the man who, starting with nothing thirty years ago, has made himself the largest single shipper of rubber in the world; what Rockefeller is in the world of oil that is Suarez in rubber in Bolivia. His income is far beyond his capacity for enjoyment, and he leads the "simple life" to a degree scarcely within the dreams of the emotional devotees of Wagner.

A thousand yards beyond the lonely grave is a long line of cabins with palm-thatched roofs and cane walls. Farther in the background straggle the huts of the Indian workmen, and on the right above the bank of the river project the black funnels of the little river steamers that are taking on their cargo of trade stuffs for the trip up among the *barraças* of the little upper tributaries. Near them is the saw mill, the blacksmith's shed, and the repair shops for Suarez's fleet. A long line of straggling Indians are portaging *bolachas* of rubber to the waiting *batalons* below the cataract.

This is the headquarters of Nicolas Suarez. He himself is seldom there. The life of the manager, seated in an office and surrounded by accounts and reports, is but little to his liking:

\* The uppermost of the long series of cataracts obstructing the river Madeira, the largest tributary of the Amazon. The location of Señor Suarez is in the extreme northeast of Bolivia—the point in that republic nearest Pará.—THE EDITOR.

generally he is off up the rivers somewhere on one of his fleet of *lanchas* and in active command of some enterprise. He began in that way, carrying his goods on his back or wielding a paddle, and now, when his business has grown so that twenty bookkeepers are needed to attend to his accounts at Esperanza alone, and he has managers up and down all of the rivers of the interior, besides his own houses in Manáos, Pará, and London, he still finds his relaxation and enjoyment in attending to the small details that gave him his start. But if some large question in the business arises it is he himself who decides it, and it is on these occasions that his genius for control and organization are manifested. In appearance he is a stockily built man

of perhaps five feet five or six in height; a square head and a strong jaw accent his personality; his hair is thick and bristly, slightly tinged with grey, and a long heavy moustache projects on either side of his head like the long horns of a plains steer. A slouch hat, a white cotton shirt that is seldom decorated with a collar save for some *fiesta*, white cotton trousers, and a cheap seersucker coat are his usual attire. On occasion he can go barefoot as readily as an Indian.

He was born in Bolivia, of Bolivian parents, and speaks only Spanish and the varying dialects of the savages that he has acquired in his trading among them. Twice he has been to London, where he established one of his brothers as the agent for the house of Suarez y Hermanos—the official name of his business. He did not care for London. Neither the food nor the customs of civilization appealed to him. He prefers the *chalona* (frozen mutton), *chuño* (frozen potatoes), *chargui* (the jerked beef of the *pampas*), and the *vis-*

*cocha* or double baked bread that is used on the river expeditions. The hard life and the simple fare are his by preference. His wealth that places every luxury within his reach means nothing to him—it is merely a matter of books and figures.

He is of uncertain age; you would readily believe that he was but 45, and you would not be surprised to know that he was 60. He was born in the little frontier village of Reyes, just beyond the eastern foothills of the Andes, and in a country that was infested with the Guarayas and Paquayguarras, hostile and treacherous *barbaros*. Those were in the days when there was no currency in the country; all trade was by barter. *Quina* (the quinine bark) was the great staple, and the enormously rich



NICOLAS SUAREZ.

[Sketched at his home in Bolivia, for THE INDIA RUBBER WORLD.]



forests of rubber were hardly touched. A little of it was picked, but the quina was the great staple. Suarez was poor, his family was poor. In a small way he started in to trade for rubber. The business thrived. Quina began to fail and rubber began to prosper. The rubber forests were held by men who had acquired them under the rights of quina. Suarez did not have the capital or the power to compete with them. He extended his operation beyond their territory. He went on out into the farther country of the savages. He traded with them, showing them that if they brought him rubber there were knives and beads and looking glasses within their reach. A few adventurous *picadores* (rubber "pickers") followed in the trail he blazed.

He took in his brothers and they spread out through all of the rivers with their canoes. Suarez was the first in the field. He was afraid of nothing; the other traders still clung to the towns. He brought in his rubber and sold it to them. Then he found that the land he had opened up was acquired by them under concessions, and he pushed farther into the interior. Then he too began to hold lands under government concessions. He had a personal knowledge of the country that the others possessed only by hearsay, and the *gomales* that he acquired were the choice of large areas. He needed more pickers for his *gomales* and he organized expeditions among the savages and kidnapped them for his uses. Year by year his power grew and his production of rubber increased. The firm of Suarez y Hermanos prospered. They opened their own houses in Manáos, Pará, and London, and sold direct. One brother started in to develop the unknown districts on the rio Mamoré, another had charge in London, and Nicolas and the fourth remained in the headquarters on the Cachuela Esperanza. They were picking and shipping hundreds of thousands of kilos of rubber.

A few years ago this latter brother and Nicolas were taking five *batalons* of rubber down over the Falls of the Madeira—some 20 tons. Suarez started at daybreak one morning and his brother was to follow later and join him below at a spot agreed upon for the halt for the noon breakfast. Nicolas reached the place and waited. An hour passed and the rest of the fleet of *batalons* did not appear in sight on the river. Something was wrong; the savages had been about, and this trip is always made with a knowledge of the danger of an attack. Suarez left a guard with his own *batalons* and with the rest of his men returned to the place of the previous camp. The *batalons* were moored to the bank as they had been left. On the sandy *playa* was the body of his brother mutilated by the barbaros; scattered about were the bodies of his crew. Not one had escaped; they had evidently been rushed in a surprise and massacred with scarcely the opportunity of firing a shot. With the few men he had with him Suarez took up the trail. He caught up with a small band of the barbaros and surrounded them. They were all killed. Suarez went on down to San Antonio and shipped his rubber. He brought a larger party of his men back with him and struck into the forest where he had taken the trail before. This time he went in deeper. Two villages of the barbaros were wiped out. But he was not through yet. On his return to Esperanza he organized a third and larger expedition and returned once again. I was assured by men who were familiar with the circumstances that on these three punitive expeditions that over 300 savages had been wiped out in satisfaction for his brothers' death.

It is the characteristic illustrated by this incident that perhaps most clearly indicates the vital means of the success of Nicholas Suarez. He never fails to exact full revenge for an injury, and never fails to remember a favor. On the frontier and among the primitive peoples with whom he has had to deal

those are the only principles that formulate themselves into a code. Among the Indians, the barbaros, and the half breeds there are the mental standards of children, and to them he stands as the embodiment of justice and protection. He punishes with an iron hand infractions against his domain, and he hands out rewards like a feudal baron, and then, most important of all, he knows when to ignore. It is a faculty that no one can acquire from civilization; it is the personal equation that has enabled him to build for himself the high, the low, and the middle justice in his commercial empire, and to hold it against all opposition.

Some idea of the extent of his power may be realized when it is known that he ships each year, over the Falls of the Madeira more rubber than all of the rubber houses of the interior combined, and over 30 per cent. of the total rubber yield of Bolivia. He owns a fleet of eight steam lanchas that ply on the upper river above the falls, of from 20 to 50 tons cargo capacity each, and that they represent a value of \$40,000 apiece. He has title to over a quarter of a million cattle that are on the pampas back from the rio Beni and rio Mamoré, and acres of rubber forests that are past the millions. His possessions to-day are valued at over £900,000, capitalized at the present earning value of the business. On the expeditions after the savages he has sent them over a thousand miles from his headquarters. On his books he carries over 3000 pickers and Indians. Over 400 of these are used exclusively in portaging the rubber over the cataracts to San Antonio. This is the most exhausting labor of over six weeks for each trip, and after every one the men rest for almost as long a period.

He has no family, but he has brought the sons of his brother in London to the Esperanza; they are Cambridge men, and they are growing into the business. But to-day he himself is the business; the qualities that he has evolved from his environment have made it what it is; he is the only factor, and it will be interesting to see if a successor will be evolved who can cement the structure he has raised.

## THE CHEMISTS AND RUBBER SUBSTITUTES.

[FROM "THE NEW YORK TIMES."]

TO THE EDITOR: A most interesting assertion is that contained in the editorial columns of your issue of February 18, to wit:

The experiments of the chemists have brought them so near success in the creation of an acceptable substitute for rubber that there remains a basis of confidence that it will yet be found.

The rubber trade at large was not aware that the "creation" of such a material as you refer to was more fully assured than that of an "acceptable substitute" for, say, gold. The discoverer or inventor of a substance having the properties of India-rubber and its adaptation to the wants of man, and more cheaply obtainable than the natural product, would be able to secure a greater financial reward than has ever been enjoyed by any inventor since the dawn of history.

It may be, however, that some philanthropist is preparing to dedicate such a discovery to the universal good, but in any event, will not you kindly favor your many readers in the rubber trade with details which offer a firmer "basis of confidence" that a new era is dawning for them than the mere assertion above quoted from your columns?

GUSTAV HEINSOHN.

New York, February 11, 1905.

GERMANY.—The import duty on four pneumatic automobile tires is approximately \$2, according to the United States consul at Aix la Chapelle.

## THE INDIA-RUBBER TRADE IN GREAT BRITAIN.

*By Our Regular Correspondent.*

IN the February issue of THE INDIA RUBBER WORLD reference is made to a new asbestos packing, and if the letterpress accurately represents the facts the novelty is one of considerable importance. It may not be superfluous to say a word on the general subject by way of elaborating the above reference. It is well known that with the advent of high pressures the demand for rubber packings has fallen off on account of the inability of this material to withstand steam at such temperatures. In modern practice asbestos has to a very large extent superseded rubber. On some steamship lines, to speak from personal experience, it is customary to use purely asbestos packings for the high pressure cylinder, while the rubber and asbestos packings of the duck type\* are used for the low pressure cylinder. It is remarkable what different reports are obtainable from this or that engineer with regard to the value of any particular packing, and it is not a wild surmise that the pushful tactics of selling agents may have something to do with this state of affairs. The feasibility of asbestos packings is enhanced by metallic insertions which vary a good deal in their nature. Messrs. Turner Brothers, of Rochdale, a well known firm in this line, make a packing from cloth with asbestos warp and lead wire weft. This is said to be more flexible than where the more usual copper wire is used. Of course a good deal depends on the quality of the asbestos as regards the scoring of the moving parts of engines is concerned. It is important that the asbestos should be absolutely free from gritty matters. No doubt the finest woven Italian asbestos is the ideal substance, but I am informed by weavers of this that the price is against its use for engine packing purposes. An alternative to the use of this fine material is a self lubricating packing such as is supplied by Messrs. Berry & Walthen, Limited, of the Premier Works, Stockport. This firm claims that by the use of their packing, which contains a core of solid lubricant, the life of the packing is trebly prolonged and any scoring of the piston rod is entirely prevented. If these claims are substantiated a decided advance will have been made upon past practice.

IT is not often that those who are practically engaged in any branch of the rubber industry give publicity to their experiences and opinions, and the paper on insulating materials recently read before the Manchester section of the Institution of Electrical Engineers forms a pleasing contrast to the customary policy of silence. The authors, Messrs. T. B. Atkinson and C. J. Beaver, went into the matter at considerable length, and anything like adequate reference or comment would take more space than can be allotted here. The utility and importance of the chemical laboratory in the cable works is abundantly testified to in the paper, especially in showing up the dubious character of continental first class cables. It is still quite exceptional for purchasers of cables, even in large amounts, to take the trouble of ascertaining whether the details of their specifications have been adhered to, and of course this works hardly against the more reputable firms. I note that special reference is made to the danger of using rubber strip which has been surface cured by the cold process. If prepared with the greatest care such strip certainly gains in tensile strength, but as the authors point out it is liable to develop acidity. I remember some years ago

that the British War office required this quality, and those who tendered for it found it a great bother. Besides, the cold cure process being objectionable to carry out, it is always a difficult matter to get just the right degree of change. As such strip contains sulphur and chlorine, albeit in very small amount, it is obviously inaccurate to call it pure rubber. In their references to fibrous insulation the authors point out that a good deal of what is supposed to be pure Manilla fiber is in reality paper prepared from wood pulp, and they draw attention to the danger attending the use of chemical pulp owing to traces of the chemicals used. Special mention is made of sulphite pulp paper, and it is well known that this material is liable to decay from residual chemicals. There is a point, however, about chemical paper pulp that the authors did not refer to. This is the quite modern manufacture of what is known as sulphate pulp which, it is claimed, withstands atmospheric agency as long as paper made from rags. The sulphate paper pulp, in which sulphurous acid is not used at all, is now being largely made in Norway and Sweden, where I had an opportunity last year of seeing the process in operation throughout.

MESSRS. W. T. GLOVER & CO., Limited, of Trafford Park, (Manchester), announce that they are putting on the market a second quality cable which is perfectly well adapted for certain of the purposes to which cables are put at the present time. This departure is of course caused, if not necessitated, by foreign competition, and it is easily understood that where the severest electrical tests are not applied or required it is useless to quote for a first class article against competitors who offer an inferior quality at an attractive price. All the same after the outcry that has been made about cable companies spoiling the prospects of rubber insulation by cheapening their products it is somewhat of a shock to read Messrs. Glover's announcement. I suppose the next move will be that competitors will point to Messrs. Glover's honest notice and say to a customer "That is a second class cable; ours is a first class one at the same price."

IN a communication to the Newcastle section of the Society of Chemical Industry Mr. John Pattinson and Dr. J. T. Dunn recently drew attention to the fact that the rubber corks in wash bottles might cause an appreciable error in estimation of sulphur. They announce that boiling water will extract sulphuric acid from red rubber corks. I should have thought this fact was well enough known by this time, and that grey as well as red rubber calls for consideration. I remember some years ago a London analyst wrote to the *Chemical News* that boiling alcohol dissolved a good deal of sulphur from rubber corks, and that this might cause serious error in certain analytical processes. This certainly is the case, and it is advisable where rubber corks are used in extraction apparatus to boil them in caustic soda solution to remove as much of the free sulphur as possible. In the case of red rubber corks and their acid aqueous extract Messrs. Pattinson and Dunn attribute this partially to the oxidation of the antimony sulphide. I don't know of any evidence to show that antimony sulphide undergoes oxidation when compounded with rubber, but I do know that this red pigment nearly always contains a considerable proportion of gypsum, sulphate of lime, and this in conjunction with the small amount of acid derived from the sulphur would no doubt be dissolved

\* Known in America as "C. I." packings—that is, cloth insertion.



to some extent by the water of the wash bottle. For all chemical purposes where accuracy is of account, it would seem advisable to extract rubber corks with alkali before using them.

THE variable fortunes of the rubber factory situated at Woodley, near Manchester, have more than once attracted notice in these columns. It is with regret that I notice that The Hyde Rubber Works, Limited, which rose Phœnix-like from the ashes of the Hyde Imperial Rubber Co., have had to call their creditors together, and that on February 17 a resolution for voluntary winding up was confirmed. Mr. George W. Dawes, who had a good deal to do with the formation of the present company, retired therefrom a year or more ago, owing to disagreement on matters of policy; he cannot therefore be considered directly responsible for the existing situation.

By the recent death of Mr. T. P. Bruce Warren rubber chemistry loses an exponent whose name has been but little before the public in recent years. Perhaps in his capacity as chemist to the Silvertown company it was more or less obligatory for him to pursue "the miserable policy of secrecy," to use the words of the late Dr. Weber. At any rate the latter could never draw Mr. Warren into print, and really there is hardly anything of his in the technical literature of the last ten or fifteen years to which one can point as advancing the chemistry of rubber. It would be illogical to infer from this that he has not done original work of value or interest; one can only say that he has not made his results public. Of course the deceased as a chemist did not confine himself entirely to rubber, the articles which he contributed so frequently to the *Chemical News* covering quite a wide range of topics. It is almost thirty years since he joined the Silvertown company as electrician and chemist, having gained considerable experience in cable matters by his association with Mr. Hooper, of rubber submarine cable renown. Though the deceased will undoubtedly be missed by the company with which he has been so long connected it will be acknowledged that the spread of knowledge in recent years renders the choice of a successor an easier task than was the case in similar circumstances thirty years ago.

FOUR rubber manufacturing firms had exhibits in this show (February 11-18), namely: The North British Rubber Co., Charles Macintosh & Co., David Moseley & Sons, and J. E. Hopkinson & Co. The North British exhibits comprised the Bartlett clincher tires in the four grades. The company's position with regard to claims differs from what is now customary amongst their competitors. They do not give any guarantee for a specified period, though they state that they are at all times prepared to make good anything defective in workmanship or quality. At Moseley's stand, however, where the "Moseley" and "Ardwick" tires were shown, a notice was displayed to the effect that the former tire was guaranteed for fifteen months and the latter for nine months from the date of delivery. A peculiarity about Moseley's best quality tire rubber is its mottled appearance, other makers turning out a product of uniform tint. The biggest show was made by Macintosh's, including such accessories as rubber solution and waterproof clothing, in addition to their well known "Macintosh" and "Coventry" tires. Here the illustrated price list was conspicuous by its absence, a policy which doubtless has its advantages, though it must militate against the retention in mind of the details of exhibits in the case of visitors from a distance. Messrs. Hopkinson showed the Drayton tire (wired on or beaded edge) and the Hopkinson patent solid tire for motor cycles, claimed to be being the first solid tire to effectually "supersede" the pneumatic. Perhaps com-

pete with would be a better verb than supersede, but as a judge recently said, every sane man makes an allowance for trade puffs. With this tire any standard artillery wheel can be fitted with but slight alteration and the method of attachment with aluminium flange plates renders creeping impossible.

THIS show (February 24-March 4) was quite the most successful of its kind held so far in Manchester. The rubber tire department, however, did not contain anything of striking novelty. Most of the well known makers were represented on one car or another, the Collier, Michelin, Continental, Clincher, Dunlop, Swain, and other tires occurring in close proximity. As far as the rubber trade was concerned the only houses well represented were the North British, Macintosh, and Moseley companies. The booklet given away to visitors by the North British company entitled "Hints and Instructions" in mounting, detaching, and repairing Clincher motor tires is a veritable mine of information of use to the increasing army of motorists. The Seddon tubeless tire was shown prominently on the Messrs. Moseley's stand. Certainly the testimonials to which these firms draw attention form an effective counter blast the oft repeated statement that first class tires are not being produced in Great Britain. Besides the "Macintosh" motor tire the firm had a large show of motorists' clothing and among other accessories I noticed dry electrical batteries, which are now being regularly supplied.—Perhaps at the present moment popular attention centers on the motor bus, the rapidly extending employment of which is agitating the breasts of those interested in street tramways and suburban railways. So far the firm whose name has been almost exclusively concerned with the tires for such heavy vehicles is the Shrewsbury & Challiner Tyre Co. of Ardwick (Manchester), though judging from reports of the show recently held at Olympia, London, it is clear that they are threatened with opposition. However as far as the Manchester show is concerned the local firm had the field to itself and its exhibit attracted a good deal of attention. There was nothing new to be seen in non-skidding devices, which but re-echoes the comments made by reporters as regards the department at the recent Olympia show.

#### REPAIRING RUBBER BOOTS.

THE New York *Press* recently printed the following contributed paragraph: "I sent a pair of rubber boots to a shoemaker to be repaired, and he nailed on leather heels and soles. Is there a cobbler in New York who can patch rubber footwear with rubber? He ought to advertise his business. Here is a single firm in New England making and selling 5,000,000 pairs of rubber shoes and boots every year. The principle of no guarantees and no repairs means a fresh sale whenever a rubber begins to leak. A competent repairer should make a handsome income."

A few days later the *Press* mentioned that this had brought 17 letters from people in the business of repairing rubber footwear—from Baltimore, Boston, Philadelphia, Newark, and New York. One New York city firm says: "Never too old to mend! Rubber boots soled and heeled with solid rubber soles and heels." It was established in 1863. The manager writes: "I do this work regularly for the police force, letter carriers, firemen, and truckmen, and some of their boots stand heeling and soling twice."

While advertisements of such work are not usual, it may be mentioned that the footwear announcements in the local newspapers of the Alling Rubber Co. (Meriden, Connecticut) make prominent mention of "Repairing."

HYDE  
RUBBER  
WORKS.

MANCHESTER  
MOTOR SHOW.

THE LATE  
MR. BRUCE WARREN.

MANCHESTER  
CYCLE SHOW.



## RUBBER NOTES FROM EUROPE.

## SUBSTANTIAL GROWTH OF ONE GERMAN COMPANY.

THE *Hannoversche Courier* learns from the management of the Continental-Caoutchouc- und Guttapercha-Compagnie that on December 31, 1903, it had 2741 persons in its employ, which number had on December 31, 1904, increased to 3294. The increase amounts to 553 employés, or about 20 per cent., within the term of one year. This showing is to be attributed to the increasing demand for the well known "Continental" products, which have become favorably known throughout the world. The company received two Grand Prizes at the St. Louis world's fair—one in Group 19, for balloons, and the other in Group 72, for pneumatic tires. It is a notable fact, says the Hanover paper, that the company's specialty, the "Continental" pneumatic tires, have a large sale, even in the United States, notwithstanding the enormous duty of 45 per cent. The direction of the Continental company propose a dividend of 33½ per cent. for the business year 1904, against 45 per cent. for the preceding year. The decrease is stated to be due to the high prices of crude rubber prevailing during the year, and the dividend might have been even smaller had the company not succeeded in largely increasing their sales.

## THE FRENCH DUNLOP TIRE COMPANY.

At the fourth annual meeting (London, February 21) of shareholders of the Société Française des Pneumatiques Dunlop, Limited, Mr. Harvey du Cros, chairman of the company, presided. The accounts presented were for the 11 months ended August 31, 1904, owing to a readjustment of the business year. The net profits were reported at £22,987, against £16,718 for the preceding 12 months. The increased profit was reported to be due to a large increase in the volume of business, which is in the sale of the Dunlop tires in France, which business has been developed with no protection in the way of patents on the tires—such as the Dunlop company in England had enjoyed—though an advantage exists to-day with respect to the employment of the Doughty patented machinery. The dividends for the 11 months include 6 per cent. on the preference and 10 per cent. on the ordinary shares.

## THE GERMAN DUNLOP TIRE FACTORY.

THE latest annual report of the chamber of commerce of Hanau, a town with 30,000 population, ten miles east of Frankfurt a/M., contains the following:

"The city of Hanau having made extensive concessions relative to the transfer of land and the opening of streets, preliminary conditions were exceptionally favorable for the newly erected rubber tire works [The Dunlop Pneumatic Tyre Co., G. m. b. H.], a branch of the Dunlop Pneumatic Tyre Co., which on October 1 last commenced manufacturing independently. The inauguration of the plant required a considerable number of new hands, which, by the end of the year 1905, will probably have increased to a total of about 200. The employés work 60 hours weekly and the works close on Saturdays at 1 P. M.

"Sales and current prices in the rubber tire industry are generally very satisfactory. A large reduction in price has been made by bicycle manufacturers, which has brought the bicycle within the reach of the financially less favored classes, and the fact, moreover, that the bicycle is rapidly becoming a general means of traffic and a necessity, have favorably influenced the sales of rubber tires, and make it probable that they will continue to show a considerable increase. The most important countries for the export trade of our manufacturers are Austria-Hungary and Switzerland, and conditions in both countries are reported to have slightly improved. However, con-

sidering the increased demand, and notwithstanding the higher quotations for crude rubber, the prices of tires show a slight decline. In the course of the year covered by the present report, several rubber works have, however, either commenced the manufacture of this article, or taken it up again after a temporary discontinuance."

## UNITED STATES RUBBER CO. IN EUROPE.

THE United States Rubber Co., Limited, was registered in London February 9, with £5000 capital, to carry on the business of manufacturers of and dealers in India-Rubber and Guttapercha goods. No initial public issue. The registered office is at 47, Farringdon street, E. C., which has long been the address of the European dépôt of the United States Rubber Co.

## HENLEY'S TELEGRAPH WORKS.

In reviewing the last report of W. T. Henley's Telegraph Works Co., Limited (London), *The Financial News* presents the company's record for the past eight years:

YEAR.	Shares and Debentures.	Dividend.	Ordinary Dividend.	Preference Dividend.
1897.....	£204,341	£25,686	12	£14,780
1898.....	230,000	30,074	14	14,528
1899.....	350,000	42,501	15	18,852
1900.....	400,000	58,162	20	24,210
1901.....	400,000	59,700	20	26,788
1902.....	400,000	55,808	20	25,968
1903.....	400,000	38,992	15	27,585
1904.....	450,000	38,204	15	26,512

[The capital now stands at £200,000 in preferred shares, and £200,000 in ordinary shares, with 2½ per cent. on the preference shares.]

The *Financial News* adds: "The financial position is a strong one; for besides the reserve, amounting to over £135,000, the undivided balance is more than equal to the payment of 4½ per cent. preference and 15 per cent. ordinary dividends for the new year, showing that there has been no dividing of profits up to the hilt. At the current quotations [£12 10s. @ £13 for ordinary and £5 7s. @ £5 12s. for preferred £5 shares] and allowing for the accrued ordinary dividends, the cumulative preference shares offer a yield of just over 4 per cent., and the ordinary shares one of nearly 6½ per cent. Obviously, therefore, Henley's securities are by no means over-priced."

The directors record with deep regret the death of their esteemed colleague, Sir Henry Morton Stanley, G. C. B.; they have elected Mr. Finch, C. I. E., to fill the vacancy.

## TELEGRAPH CONSTRUCTION AND MAINTENANCE.

THE accounts for the business year 1904 of the Telegraph Construction and Maintenance Co., Limited, presented at the forty-first annual meeting of the shareholders in London last month, showed net profits for the year of £48,825, after charging the interest on the debentures. The profits were £108,738 in 1903; £99,000 in 1902; and £105,695 in 1901. The decreased product for the past year appeared to have been due to the fact that the company's work generally was on a less extensive scale than for several years, although various lengths of cable were manufactured and sundry cable repairing operations were carried out. The company's factories had been well maintained and a portion of the Greenwich factory rebuilt and improved plant introduced. A new cable steamer, the *Cambria*, of 1955 tons, was launched in November. The dividend paid was only 15 per cent. on the ordinary shares, against 20 per cent. in each year since 1899. The dividend on the preferred shares is 4½ per cent. as usual. The company carry forward, however, £102,484, which compares favorably with the average figures under this heading, although last year the carry forward was £120,484. In reply to questions, the chairman (Sir Robert Herbert) said with reference to the possible cable between Denmark and Ireland, which would be put through by the Great Northern Telegraph Co., that they had heard of no movement with



regard to the construction up to the present time. He had not mentioned the new Atlantic cable [See THE INDIA RUBBER WORLD, March 1, 1905—page 208] because the arrangements for it were not absolutely completed, but he had pleasure in informing them that they had made arrangements for the construction of that cable, and they would be putting it in hand before long. They had got the business to do, and would do it before the end of the year.

#### GREAT BRITAIN.

MR. ADAM CAIRNS has retired from the important firm of Achnach & Co., waterproofing manufacturers, Thistle Rubber Mills, Glasgow, after a connection of 18 years, having been latterly their manager. He is engaging in business on his own account, at 98, Commerce street, Glasgow, as a manufacturer of mechanicals, and waterproofer for the trade. At a meeting of the employes of Messrs. Achnach & Co., Mr. Cairns was presented with a token of their esteem.

=The works of the India Rubber Manufacturing Co. at Deptford, London, were offered for sale by order of the mortgagees on February 16, having been valued at about £17,000. The bidding failed to reach £5000, however, and the property was withdrawn.

=The Dunlop Pneumatic Tyre Co., Limited, at the recent Olympia automobile show in London, exhibited in their booth several relics of interest to the trade, including a specimen of the first pneumatic tire, made in 1845 under R. W. Thompson's British patent, and fitted to a coach wheel.

=On January 7 an issue of £17,000 out of £20,000 first mortgage debentures was made by the reorganized company, The New Eccles Rubber Co., Limited. The trustees are Messrs. H. A. and P. A. Birley, directors of Messrs. Charles Macintosh & Co., Limited.

#### GERMANY.

THE German rubber industry was very fully represented at the recent international automobile exhibition in Berlin, most of the leading factories in the technical (mechanical) branch having displays of tires for automobiles, and in a number of cases for motorcycles and bicycles as well, together with inner tubes, repair outfits, and the like. The principal foreign exhibitors in this department were the North British Rubber Co., Limited, the Dunlop Pneumatic Tyre Co., and Michelin & Co., the latter two companies being represented through their German branches, located at Hanau and Frankfort o/M., respectively.

=The Aktiengesellschaft Metzler & Co. (Munich) have granted to Herr C. Graupner, Naschmarkt 3, Leipzig, the agency for the sale of their technical and surgical goods in Saxony.

=The Rumänische Allgemeine Elektrizitäts Gesellschaft has been organized in Berlin with a capital of 1,000,000 marks [= \$238,000], in connection with the Allgemeine Elektrizitäts-Gesellschaft, for carrying on the electrical trade in Rumania.

=Herr Leon Ekert has again become a member of the rubber shoe firm Ekert Brothers, Bei den Mühren, 48, Hamburg, large dealers in American goods.

=Friedrich Richter, since January 9, 1880, porter in the employ of the firm of Gustav Krieg, dealers in rubber goods, Leipsic, recently celebrated his twenty-fifth anniversary of his connection with the house. Herr Hans Krieg, head of the firm, deposited a handsome sum in a savings bank to the credit of the faithful employé, who also received a number of presents from the staff of the firm.

=Mannheimer Gummi-, Guttapercha-, und Asbest-Fabrik was not able to declare a dividend for 1903, but is reported to

have experienced an improvement in business, and may declare a small dividend for 1904. The capital is 1,125,800 marks, and the 1902 dividend 5 per cent.

=At the beginning of the year a strike existed at the Mittel-deutschen Gummiwaaren-Fabrik Louis Peter (Frankfort o/M.), but the *Gummi-Zeitung* reported a fortnight later that the works were being operated with a full quota of hands and that no damage had been sustained by the company. The reported cause of the strike was the discharge of an employé for disrespectful remarks in regard to the firm, after he had refused to apologize. Thereupon those employes who belonged to the *Sozialdemokratischen* organization (about 120 in number) quit work, and refused all overtures from the firm for a friendly understanding.

#### RUSSIAN MAILS BAR CELLULOID.

THE general administration of the Russian posts and telegraphs has informed the postal departments that the prohibition of the forwarding of Celluloid and Celluloid goods from foreign countries into Russia includes not only parcel post packages, but likewise goods sent in open wrapper, sealed letters, and packages with declared value. The postoffices have therefore been instructed to deal with matter of the kind described above, and coming from foreign countries, in accordance with the following rules:

Whenever, on opening the mail bags, packages in open wrapper containing Celluloid goods exclusively are found in such postoffices (including railroad mail cars) as have a direct exchange of foreign mail, such packages are not to be turned over to the custom house, but must be destroyed. If, however, such packages in open wrapper contain other goods besides Celluloid goods, only the latter are to be destroyed, and the remaining goods under the same wrapper are to be forwarded to the addressee in accordance with the general rules. Ordinary or registered sealed letters and packages with declared value marked on the envelope as containing Celluloid goods, received from foreign countries in such postoffices (including railroad mail cars) as have a direct exchange of foreign mail, are to be opened at such postoffices, and to be dealt with in the manner described above.

If the envelopes of ordinary or registered sealed letters or packages with declared value from foreign countries, and received at such postoffices having direct exchange of foreign mail, are not marked as containing Celluloid goods—the customs inspection, however, showing that they do contain such goods—the Celluloid goods are to be removed in the presence of the postal official present at such inspection. Such letters and packages are thereupon to be delivered to the local postoffice, together with the Celluloid goods which have been removed, and an official statement drawn up at the time of the inspection, the Celluloid goods to be destroyed at such postoffice, and the remaining contents, if any, to be forwarded to the addressee in accordance with the general rules.

A statement is likewise to be drawn up in regard the destruction at the postoffice, of the above described mail matter or of that part of it consisting in Celluloid goods, such statement to be presented to the addressee at the time the remaining contents of the letters or packages are delivered.

The prohibition of the forwarding by mail of Celluloid goods from foreign countries, includes, moreover, ordinary and registered postal cards made from Celluloid. Such postal cards are therefore destroyed at such postoffice, having a direct exchange of foreign mail, at which they are received, and an official statement is drawn up, verifying such destruction.

## THE ENORMOUS AUTOMOBILE INDUSTRY.

THE records of the import and export trade in automobiles of the principal countries concerned possess a certain interest for the rubber trade, as supplying the most trustworthy statistics of the extent and growth of the automobile interest. And this interest, as everybody knows, cannot exist without the use of rubber in tires. The automobile export trade of France alone—nearly \$14,000,000 last year—means an enormous production, to say nothing of the machines made for home use. Great Britain is still a large importer, the figures for last year exceeding \$12,000,000. The number of cars involved cannot be learned, but the values stated prove that a great number of tires has been called for. Besides, these are initial costs, and once an automobile has been placed in commission, a steady demand sets in for tires for replacement.

The United States are importing somewhat more cars year by year, mainly of high priced goods, but the increase is more than offset by the growing exports from this country. The statistics of motor cycles are also of interest, as these also create an important demand for tires.

Accurate figures relating to the world's total production of automobiles are not available, but the estimates for France of the Chambre Syndicate de l'Automobile of that country are of interest. The number of cars made and their value (in American money) during seven years has been:

YEAR.	Number.	Value.	YEAR.	Number.	Value.
1898.....	1,850	\$1,602,000	1902.....	16,500	19,107,000
1899.....	1,900	1,833,500	1903.....	19,500	26,248,000
1900.....	5,000	5,307,500	1904 (est'd)	22,000	34,000,000
1901.....	8,800	10,229,000			

The number of automobiles in France registered and taxed in 1903 was 19,868, and it was expected that by the end of last year it would reach nearly 30,000. In 1903, in addition to automobiles, there were registered 19,816 motor cycles and 1,310,223 bicycles.

The number of automobiles made in the United States last year has been estimated by careful observers at about 27,000 and a larger production has been planned for this year. The number of cars now in use in the country it is impossible to say, but many thousands made before 1904 must still be serviceable. Doubtless the United States census of manufactures for 1905, now being organized at Washington, will result in some definite and trustworthy figures on this subject.

## GERMANY.

OFFICIAL statement of values of imports and exports of automobiles for three years:

IMPORTS.					
	1902.	1903.	1904.		
Personal vehicles.....	M3,554,000	M5,077,000	M7,537,000		
Other motor wagons.....	148,000	196,000	208,000		
Total.....	M3,702,000	M5,273,000	M7,745,000		
Total, U. S. money...	\$881,076	\$1,254,974	\$1,844,310		
EXPORTS.					
	1902.	1903.	1904.		
Personal vehicles....	M4,741,000	M5,288,000	M11,777,000		
Other motor wagons ..	608,000	907,000	1,392,000		
Total.....	M5,349,000	M6,195,000	M13,169,000		
Total, U. S. money.	\$1,273,062	\$1,474,410	\$3,134,222		

Details of weights of German imports of automobiles are given, showing that in 1901 France furnished 61 per cent. of such imports; in 1902, 73 per cent.; in 1903, 71 per cent.; and

in 1904, 72½ per cent., these figures not applying to commercial wagons. Of the German automobile exports for 1904, France took 33 per cent.; Great Britain, 23 per cent.; Austria-Hungary, 17 per cent.; Belgium, 7 per cent., and the rest scattering.

## UNITED STATES.

A WASHINGTON report on "Exports Declared for the United States, During the Fiscal Year Ended June 30, 1904," embraces the following details regarding automobiles exported from French ports to this country, for comparison with which the corresponding figures for the preceding year are given:

	1903.	1904.
Paris (automobiles and parts).....	\$1,097,725	\$1,662,346
Dijon.....	2,692	117
Havre.....	4,336	.....
Marseilles.....	5,558	2,413
Rheims.....	6,623	.....
Total.....	\$1,116,334	\$1,664,876

[NOTE.—Figures for the last year also include: *Havre*: American automobiles returned, \$787. *Amoy*: tires, \$501. *Marseilles*: tire protectors, \$.....]

The same report contains also the following details of declared values of automobiles exported from other ports to the United States during 1903-04: Aix la Chapelle, \$1683; Mannheim, \$8175; Turin (including parts), \$50,911; Southampton, \$2500; total, \$63,269. Total, last year, \$25,407.36.

The imports of automobiles and parts from all countries into the United States for the past two years have been as follows:

FISCAL YEAR ENDED JUNE 30, 1903.			
	Number.	Value.	Duty.
Automobiles.....	317	\$ 963,998	\$433,799
Parts.....	.....	45,003	20,251
Total.....	.....	\$1,009,001	\$454,050
Average import duty of vehicles.....	.....	.....	\$3,040.68
Average value, with duty added.....	.....	.....	4,377.91

FISCAL YEAR ENDED JUNE 30, 1904.			
	Number.	Value.	Duty.
Automobiles.....	423	\$1,294,160	\$582,372
Parts.....	.....	152,143	68,464
Total.....	.....	\$1,446,303	\$650,836
Average import value of vehicles.....	.....	.....	\$3059.19
Average value, with duty added.....	.....	.....	4,431.20

Average rate of duty.....45 per cent.

[In the "Parts" metal is the material of chief value.]

Exports of automobiles and parts from the United States have been, in value, as follows:

1901 (July-December).....	\$ 367,371
1902 (twelve months).....	1,069,792
1903 (twelve months).....	1,643,029
1904 (twelve months) .....	1,997,510

## FRANCE.

THE value of exports of automobiles from France during four years past, as officially reported, has been as follows, in connection with which are given equivalent values in United States money:

	1901.	1902.	1903.	1904.
Francs.....	15,782,000	30,251,000	50,892,000	71,302,000
U. S. money \$3,045,926	\$5,838,443	\$9,822,156	\$13,761,286	

These figures are not based upon selling prices, but result from the French government's official appraisal of motor vehicles in bulk at 10 francs per kilogram [=a little less than 90 cents per pound]. It has been asserted, in former years, that the actual export values were considerably higher than shown in the official returns.



The value of imports of automobiles was 1,068,000 francs in 1902; 1,267,000 francs in 1903; and 3,635,000 francs in 1904.

==Statistics of values of motor cycles and parts:

	1904.	1903.	1902.
Imports.....	11,000	11,000	51,000
Exports.....	545,000	561,000	1,202,000

#### GREAT BRITAIN.

CUSTOMS returns in respect of automobiles, prior to 1904, included motor cycles. Values were officially stated as follows:

IMPORTS.			
	1904.	1903.	1902.
Motor cars.....	£2,080,371	£1,713,972	£992,229
Motor cycles.....	38,555		
Motor car parts.....	343,569	274,466	110,836
Motor cycle parts.....	10,872		
Total.....	£2,473,367	£1,988,438	£1,103,065
U. S. money.....	\$12,007,300	\$9,676,734	\$5,368,066

EXPORTS—BRITISH MAKES.			
	1904.	1903.	1902.
Motor cars.....	£241,708	£285,662	£155,340
Motor cycles.....	31,117		
Motor car parts.....	80,258	58,363	16,803
Motor cycle parts.....	7,294		
Total.....	£359,377	£344,025	£172,143
U. S. money.....	\$1,748,908	\$1,674,195	\$837,734

EXPORTS—FOREIGN MAKES.			
	1904.	1903.	1902.
Motor cars.....	£168,257	£126,659	£52,714
Motor cycles.....	2,749		
Motor car parts.....	27,523	16,240	5,161
Motor cycle parts.....	1,216		
Total.....	£199,745	£142,899	£57,875
U. S. money.....	\$972,060	\$695,418	\$271,916

The number of vehicles comprised in the British statistics from which the above figures are derived was as follows:

	1904.	1903.	1902.
Imports.....	6357	6133	3747
Exports--Domestic.....	1474	927	415
Foreign.....	493	382	183
Net Imports.....	4390	4824	3149

Imports for 1904 included 5378 motor cars and 979 motor cycles. British exports: 703 motor cars and 771 motor cycles. Reexports: 406 motor cars and 87 motor cycles.

Average values (1904): Motor cars imported, \$1881.60; domestic cars exported, \$1673.20; foreign cars reexported, \$2016.70.

#### BELGIUM.

IMPORTS (VALUES IN FRANCS.)			
	1904.	1903.	1902.
Motor cars.....	860,580	525,487	561,800
Parts.....	1,048,324	691,855	361,329
Motor cycles.....	60,960	29,931	25,110
Parts.....	49,519	40,104	27,261
Total.....	2,019,383	1,287,377	975,500
U. S. money.....	\$389,741	\$248,464	\$188,272

EXPORTS (VALUES IN FRANCS.)			
	1904.	1903.	1902.
Motor cars.....	1,622,105	1,519,728	1,197,390
Parts.....	641,881	411,645	254,356
Motor cycles.....	1,381,079	1,430,166	448,029
Parts.....	2,041,397	2,545,585	1,097,045
Total.....	5,686,462	5,907,124	2,996,820
U. S. money.....	\$1,097,487	\$1,140,075	\$578,476

Imports—Motor cars, 151 in 1904; 118 in 1903; 145 in 1902. Of which France furnished 122, 100, and 118, in the three years, respectively. Parts, including tires, came principally from France. Motor cycles, 156 in 1904; 58 in 1903; 50 in 1902.

Exports—Motor cars, 184 in 1904; 179 in 1903; 205 in 1902. Motor cycles, 2393 in 1904; 2450 in 1903; 825 in 1902. Average value of 1904 exports, 576.65 francs [= \$101.30].

#### MOTOR 'BUSES FOR LONDON STREETS.

ONE of the most distinctive institutions of London, the omnibus, appears doomed by the competition of the motor car, judging by the rapid growth of popularity of the latter. The London 'buses are owned and operated for the most part by a few large joint stock companies, the importance of which may be indicated by some figures published in connection with a single one of them. The London General Omnibus Co., Limited, has a capital, including debentures, of £1,073,592, and during the last half of 1903 carried 108,034,641 passengers, running a daily average of 1420 buses and having at the end of the period 17,183 horses. The net profit for the six months was £49,263, and the rate of dividend for some time past has been 8 per cent. All the companies, of course, are not so large, and all have not been so profitable. The company referred to and the London Road Car Co., Limited, have each begun to experiment with motor 'buses as a measure of precaution against the period when the horse drawn omnibus will cease to be used.

Since the beginning of the year three large companies have been floated for the purpose of introducing petrol motors on the streets, and the first of these has already made a beginning of its service. The London Motor Omnibus Co., Limited, with £103,000 capital, on January 10 last offered its initial issue of £60,000 in shares, and on March 1 started its first car, with the idea of being able to add three cars weekly, until the number reaches 70, after which, if the service proved satisfactory, it is intended to make a new issue of shares. The idea is to run these cars on an average of 90 miles a day, for 300 days in the year; the profit calculated is 2d. per mile run. The directors are men familiar with railway and omnibus transportation, and one is on the board of the Birmingham Motor Express Co., Limited, which is reported to have earned to date an average of 5d. per mile on an average run for each omnibus of 90 miles per day.

The London and District Motor Bus Co., Limited, organized with £405,000 capital, on March 9 offered its initial issue of £250,000 in shares, and the London Power Omnibus Co., Limited, on March 10 offered its whole capital issue of \$200,000. These two companies plan to put in commission 200 and 100 omnibuses respectively, and the latter begin by purchasing a small company which has operated 8 motor cars successfully for a year past.

The new motors are of two classes—single-deck, to seat 16 passengers, and double-deck, to seat 32, the latter being used on the more congested routes. According to the prospectuses the new service "will give the public the speed of a well horsed hansom for the fare of an omnibus." The London newspapers have commented very favorably upon the innovation, and a report which is of interest is that the president of the London cabmen's union has advised the starting of training classes for instruction in motor driving, to which, by the end of February, more than a thousand cabmen had applied for admission.

The interest of this new movement to the rubber industry is very great, in view of the new demand which will be created for elastic tires. It is stated in the prospectus of the London and District Motor Bus Co., Limited, that the Dunlop Rubber Co., Limited, have entered into a provisional contract to supply tires for the omnibuses used by this company, for a period of two years. It is understood that the terms provide for the maintenance of the tires at a cost of about 2d. per mile. This figure, in view of an average run of 90 miles for 300 days, works out at £225 [= \$1095] as the yearly cost of tires for one vehicle.

## THE PROGRESS OF RUBBER PLANTING.

## RUBBER PLANTING IN CEYLON.

THE annual meeting of the Kalutara Planters' Association was held on January 28, being well attended. The secretary's report showed 34 estates on the register, against 28 in the preceding report. The finances were shown to be in a good condition. The report contained the following references to India-rubber:

*Acreage.*—The acreage under rubber alone is 3123 acres, against 1103 in 1903; planted through the tea, 6759 acres. There are 49,484 trees in bearing=242 acres at 200 trees per acre, which have yielded 23½ tons, against 15 tons last year. The estimate of dry rubber for 1905 is 30 tons. Extensions during 1905 will be about 2425 acres.

*Prices.*—Prices for rubber have steadily risen, and those estates which have recently sold biscuits at 6s. 1d. per pound are to be congratulated. A large quantity of plants and seed have been sold from the district, not only in the island, but to all parts of the East and, we understand, have generally given satisfaction. The rubber canker, which was mentioned in your last report, is still in evidence, but we have no hesitation in saying that, if the instructions of Mr. Carruthers, the late government mycologist, are carefully carried out, there is little to be feared from it. We trust that government will continue to carefully watch the disease at their Edingoda and Yatipawa plantations, on the road to Ratnapura, where the disease is said to be eradicated, and that they will take steps to cope with it at Badureliya as well, where up to date nothing has been done.

The chairman, Mr. C. Henly, and the secretary, Mr. P. W. N. Farquharson, declining reëlection, the first office was filled by the election of Mr. C. C. Mee, proprietor of the Neuchatel estate, Naboda, and Mr. Inglis was chosen as secretary.

\* \* \*

At the annual meeting of the Matale Planters' Association, at Matale, on January 28, encouraging expressions were heard in relation to rubber planting prospects. The annual report contained the following paragraph:

*Rubber.*—This product has come to stay. The prospects of this product are extremely brilliant, and a large acreage will soon be planted with it in Matale. The district, with its rich soil and forcing climate, should be peculiarly favorable to the growth of rubber. The wretched prices prevailing for Matale grown tea should be an additional incentive to press on the cultivation of what is perhaps the most hopeful cultivation ever undertaken by Ceylon planters.

At the annual meeting of the Passara Planters' Association, on January 28, the report read contained the following paragraph:

*Rubber.*—Pará rubber was largely planted during the year. Over 1500 acres are now under this cultivation. It grows well, and there appears a bright future for this product in the district. The few trees tapped are giving satisfactory results, and consignments sold on the London market have fetched top prices.

At the annual meeting of the Kegalle Planters' Association, on February 4, the chairman reported 815 acres planted to Pará rubber in the district to the end of 1904, exclusive of innumerable rubber trees planted through the tea. Reports submitted by the members indicated that the acreage planted to rubber alone would reach 1700 during the current year.

At the annual meeting of the Ambegamuwa Planters' Association, on February 1, considerable discussion was given to the subject of the damages done to young rubber plantations by the villagers' cattle, it being asserted that thousands of rupees were being lost owing to rubber being destroyed. A resolution was adopted requesting the government to warn the

villagers to restrain their cattle, and to enforce penalties for neglect of the warning.

At the annual meeting of the Kurunegala Planters' Association on February 11 the report presented contained the following:

*Rubber.*—The product has been planted to a very large extent in this district during the last three years, and the prices obtained for rubber sent out of the district have reached the top of the market. Further areas are being opened this year.

\* \* \*

At a meeting of the Ceylon Board of Agriculture, on February 6, the governor of the colony, Sir Henry E. Blake, who presided, read a letter from Sir Thiselton Dyer, director of the Royal Botanic Gardens, Kew, from which the following is an extract:

I believe you have a good thing in rubber. Kew introduced it into Ceylon in 1876 at the expense of the Indian government. I hear you have already 12,000 acres planted up with it, which is not a bad beginning. Ceylon Pará rubber has fetched 6s. 1d. a pound, which is the highest price rubber has ever fetched, at any rate in modern times. I hear from private sources that Manchester will take any quantity, as, on account of its extreme purity, it lends itself at once to manufacturing purposes without previous preparation. The demand for rubber is growing, and is practically inexhaustible, and Brazil is showing signs of not being able to keep pace with the demand. I hope to start this cultivation on the Gold Coast, and I sent our man there, to Ceylon, to see what was being done. He has written a useful book as a result. [This book was reviewed in THE INDIA RUBBER WORLD, February 1, 1904—page 163.—THE EDITOR.]

\* \* \*

THE *Times of Ceylon* contains an interview with Mr. G. B. Leechman, of Colombo, upon his recent visit to the rubber plantations in the Malay States, where he found the outlook very bright. There was no means of estimating the area planted to rubber thus far, but it is certainly large, and a good deal of Malay States rubber has now come into bearing, the trees being 7 years old. The planters and the government have joined hands to employ Mr. P. J. Burgess, of the botanical gardens staff, in the capacity of rubber expert, and Mr. Burgess will shortly spend some months in travel in Europe to inquire into the various aspects of the rubber industry, with the idea of putting any knowledge gained at the disposal of the planters at home. He has already delivered some lectures to the planters both in the Malay States and in Ceylon which have been well received. Mr. Leechman thought that in the matter of employing a rubber expert the planters of the Malay States were ahead of those in Ceylon. The Malay States planters are also hopeful of good results from the work of the new agricultural department, the head of which, Mr. J. B. Carruthers, is now pursuing some studies at the National History Museum in London, where the name of Carruthers is well known, his father, Dr. Carruthers, having been an official there for many years.

## RUBBER IN REPORTS OF CEYLON TEA COMPANIES.

THE annual meetings of shareholders of a number of Ceylon tea planting companies were held in February, and from *The Times of Ceylon* it appears that as a rule rubber figured in the reports presented and in the discussions which followed. Below are summarized some of the details in these reports, with a view to illustrating the nature of the interest which the tea planters are taking in the new product.

At the eighth annual meeting of the Ceylon Tea and Cocoa-



nut Estates Co., Limited (Colombo, February 11), the chairman referred to a very successful year, the tea product having been satisfactory, the operating expenses reasonable, and the price realized all that was expected. The company have begun to plant rubber, having now about 45,000 trees, varying in age from a year upwards. Probably 25,000 plants will be put in this year. They have 16,683 trees on 80 acres planted to rubber alone, and the rest are planted among tea. Last year they tapped some of the older rubber trees for the first time, obtaining 521 pounds. The directors expect at least 1500 pounds this year, and a steady annual increase.

The report of the Kalutara Co., Limited, read at the ninth annual meeting (Colombo, February 11), was devoted largely to rubber. A recent census shows 14,297 Pará rubber trees planted among tea, of which 1000 are now fit for tapping, and 33,149 trees in clearings. A nursery of about 200,000 plants is doing well, and the directors recommended the issue of treasury stock to provide for a further planting of 150 acres this year. A resolution to this effect was adopted. The first rubber tapping occurred during the year and yielded 750 pounds.

At the ninth annual meeting of the Knavesmire Estates Co., Limited (Colombo, February 11), it was reported that 25 acres had been planted to rubber during the year, in addition to probably 50,000 plants already growing in the tea fields, of which 12,000 should be ready to tap toward the end of 1905.

The Southern Ceylon Tea and Rubber Co., Limited, held their first annual meeting on February 8. One hundred acres had been planted to rubber during the year, and 200 acres cleared for planting this year. Last year's work also included planting of rubber through 187 acres of tea.

At the fifth annual meeting of the Neboda Tea Co. of Ceylon (Colombo, February 11), it was stated that the company now own 35 acres in rubber, rising two years old, and 72 acres planted April-May, 1904, beside many trees planted in ravines, some of which are now old enough to tap. Clearing was in progress for 150 acres to be planted in 1905.

At the eighth annual meeting of the Pitakande Tea Co. of Ceylon, Limited (Colombo, February 11), the chairman stated that the 25 acres of rubber planted as an experiment was growing well and that it had been decided to increase the area to over 100 acres during the present year.

#### FEDERATED MALAY STATES.

At the sixth annual meeting of the Malacca Rubber and Tapico Co., Limited, held on December 12, it was reported that on the company's Bukit Asahan estate of 4300 acres, 3300 acres had been planted to rubber, there now being 638,000 trees of ages varying from 6 months to 6½ years. The planting has been most largely *Hevea*, though some *Ficus* has been planted. Experimental tapping was begun in November, 1904, by the herring bone method, with good results, and more than 12,000 *Hevea* trees have been marked and numbered for tapping in 1905. It is intended this year to reorganize the company by inviting subscriptions from the public, in order to cancel loans recently made from the bank and provide further working capital. A drying house has been erected which it is expected will enable shipments of rubber to be made within a week after collection of the *latex*. The managing director reported that his study of accounts indicated that their rubber could be placed on the London market at ¾ rupee [=24 cents, gold] per pound. The chairman of this company privately owns the neighboring Bukit Lintang estate, which already has exported some rubber to London.

Batu Caves Rubber Co., Limited [mentioned in this Journal last month] hold 1857 acres under freehold title from the Federated

Malay States government, seven miles from Kuala Lumpur. The primary production is to be Pará rubber, but coffee will be grown as a temporary crop until the rubber has overshadowed it. There are now 264 acres in coffee, interplanted with rubber one and two years old; 100 acres are now being planted to rubber; the remainder is virgin forest and grass lands. It is proposed to have 1000 acres planted to rubber by the end of 1897. Tin has been discovered on the land, and is being worked by Chinese miners on a royalty basis, giving promise of considerable revenue. Of the 30,000 capital shares of £1 each, 18,000 have been issued.

The Sungei Way (Selangor) Rubber Co., Limited—registered offices, 44, West George street, Glasgow, Scotland—to adopt an agreement with the Selangor Rubber Co., Limited, and carry on the business of growing India-rubber and other products in the Straits Settlements and elsewhere. First directors: Sir Frank A. Swettenham, late governor of the Straits Settlements; Thomas Johnston, public company manager (Glasgow), Charles B. Paterson (Whitham), Thomas A. Gallie, merchant (Glasgow), and T. N. Christie (Lhanbryde, Wales).

#### RUBBER CULTIVATION IN SAMOA.

THE first rubber plantation on an important scale in Samoa is just making a beginning. The *Malay Mail* notes a recent visit to the Federated Malay States of Herr A. Spemann, of Sinsega, Samoa, who is plantation manager for the Samoa-Cautschuk-Compagnie, G.m.b.H., whose mission was the study of *Hevea* rubber under cultivation and arranging for supplies of seed. He purchased 200,000 Pará seeds from the Sungei Rengam estate, near Selangor. The planting company named, now in its first year, has its headquarters in Berlin. Four thousand acres have been taken up in Samoa, of which it is proposed to plant 2500 during the next five years, with Pará rubber and a small amount of *Ficus*. There are three other important German planting enterprises in Samoa, the oldest of which, the Deutsche Handels- und Plantagen-Gesellschaft der Sudsee-Inseln zu Hamburg, though dating only from 1878 as a company, has in charge a plantation formed in 1857. The company has 6000 acres under cultivation, mostly in cocoanuts, with a herd of 2000 cattle, and is reported to have been very successful.

#### RECEIVER FOR A PLANTATION COMPANY.

THE directors of the Rochester-Mexican Plantation Co. (Rochester, New York), having filed a petition for the voluntary dissolution of the company, on the ground that the company is insolvent, the supreme court at Rochester has appointed Charles H. Angel, of that city, temporary receiver of the property of the corporation, and all persons interested are ordered to appear on April 20 to show cause why the corporation should not be dissolved. THE INDIA RUBBER WORLD has previously referred to this company as follows [May 1, 1903]:

#### ROCHESTER MEXICAN PLANTATION CO.

[Plantation "Las Lomas," on the river Coatzacoalcas, state of Vera Cruz, Mexico. Office: Granite building, Rochester, New York.]

INCORPORATED November 27, 1901, under New York laws; capital \$60,000. Purchased a plantation cleared and planted in 1899, to 120,000 coffee trees and 8000 rubber trees; 30,500 additional rubber trees were planted in 1902. Officers: Charles H. Angel, president; A. S. Pendry (referred to as an expert tropical planter), vice president; John B. Snyder, secretary; John L. Zeeveld, treasurer.

This being the first instance of the dissolution of a planting company organized on the basis generally adopted by the American companies formed to plant rubber in Mexico—the capital being supplied in installments by a number of small investors—the outcome will be of interest as indicating what investors of this type may realize in cases of liquidation.

## GATHERING "CASTILLOA" RUBBER IN PANAMA.

UNDER the heading "Exploring for *Castilloa* Rubber in Panama" the Editor of THE INDIA RUBBER WORLD recently wrote a series of letters detailing the examination of 800 square miles of territory in the republic of Panama. This tract has since been acquired by an American syndicate who have started in to develop the property. The primary work done there is along the line of gathering rubber from the wild trees, of which there are several hundred thousand. The gathering of the rubber, and indeed the develop-

were sound and practical is substantially proven by a shipment of 3000 pounds—one month's work—which went forward a few days ago. The progress of clearing, opening trails, and replanting the thousands of little seedlings has advanced in a most satisfactory manner. To-day, Camp Pearson is a little village of eight substantial ranches, in the midst of a clearing of 35 acres. We have 50 rubber cutters, who are tapping the trees and delivering the milk to our camp, and an added force of 50 men opening up the trails in the unexplored regions.

New growths of fine *Castilloa* are constantly being discovered, especially through the river valleys and the deep gulches.

Near Palo Seco we found trees which are 24 inches in diameter and are fine vigorous specimens. The records which I am keeping on the product from these trees will be interesting.

The old methods of gathering the rubber by the use of the *machete* and *calabash* and coagulating without straining are entirely superseded by modern methods. The new tapping tool that you sent down is exactly what we want, and I have ordered more of them, and will equip all of the camps with this practical device.

It does not injure the tree in the least, and the cut heals quickly. Besides, its mark is so distinctive that any native using a *machete* on the tree would be at once detected.

By straining the *latex* and handling the product properly, we are producing *tortillas* of rubber which have been sold at \$1.15 per pound. There is no question but what in a short space of time we will be producing perfectly clear, clean, "pancake" rubber that will constantly increase in volume with the number of men we can work. While you were at Camp Pearson, you will recollect the clearing of the undergrowth from the grove



CAMP PEARSON—CLARK STREET.



CAMP PEARSON—COAGULATING HOUSE, INTERIOR.

ment of the whole property, is under the immediate charge of Mr. William M. Morse, one of the men who made up the original expedition, and who is doing away with crude native methods of gathering and coagulating, and using modern, economical methods. As this is the first experiment on a large scale for handling *Castilloa* along scientific lines, the following letter from Mr. Morse is interesting:

TO THE EDITOR OF THE INDIA RUBBER WORLD: The closing chapters of your interesting description of your last year's visit to the Azuero rubber lands have just been read by me in the February number. It was with genuine regret—because there is no more to come. In this faraway corner, your monthly magazine is my greatest comfort and infallible guide. By special arrangement, a messenger traveling 80 miles by boat and 35 miles on horseback over the mountains brings THE INDIA RUBBER WORLD to me regularly, and it is well worth the extra trouble and expense.

While you were here a year ago at Rio Negro, which has been named Camp Pearson in your honor, you expressed a desire to know the results of your suggestions for increasing the crude rubber product. That your ideas



PALO SECO—OLD "CASTILLOA" TREES



SHIPPING FACILITIES AT CHITRE.



of 108 *Castilloas* which lie between the camp and the river. The results of giving these trees the necessary amount of sunlight is shown by the remarkable growth and increased *latex* producing power of these trees.

I wish your readers could have looked in upon this stretch of virgin forest last June and could now take another view of it, and see what really effective work these Astec Indians can do if well fed and properly managed. I enclose photographs of the new ranches, clearings, and other views which I am certain will interest you. *Hasta la vista.*

W. M. MORSE.

## THE WESTERN RUBBER SHOE TRADE.

BY A CHICAGO CORRESPONDENT.

**W**ESTERN jobbers declare the season of 1904-5 has been a very satisfactory one for the rubber shoe trade. While the emergency trade in the north and northwestern parts of Chicago's territory has been exceedingly backward, it is just now giving indications of equalling the previous years both in volume of business and character of goods handled.

In this northern trade the "Combination" footwear is the popular article and its uses are being extended yearly. This is especially true in Michigan, Wisconsin, northern Illinois, Iowa, and Minnesota, where the weather as a rule is cold and crisp.

There has been a slight decrease in the demand for heavy rubber footwear in the larger cities, which is attributable directly to the use of waterproofed leather goods, but on the other hand the demand for light weight rubber footwear has increased materially in the larger cities.

Every year the jobbers as a rule exhaust their regular stock before the season ends and call upon the wholesalers and manufacturer for an additional stock. In order to meet this demand, which is usually very pressing, large emergency stocks are kept in Chicago by the manufacturers, to be drawn on when this emergency trade demands it. Last year this demand came early, especially from the Chicago jobbers who were kept busy in this immediate vicinity in supplying retailers.

It will be recalled that last winter was the most remarkable in years. In fact, in the history of the local weather office there has only been one other in which there was so much snow fall. Snow fell Thanksgiving day in Chicago and earlier in the country, and remained on the ground continually until well into February, and after the first thaw another came which remained until the end of winter. While that condition was conducive to the demand for combinations, the thaw came so late that the volume of rubber shoe goods sold was not so great. On the whole, however, the business last year was a record breaker, according to the local jobber.

"We have had an exceedingly satisfactory season," said Mr. E. G. Stearns, of the Chicago Rubber Shoe Co. "It will exceed in volume of business last year. The season has been more uneven, and while the amount of snow has been less the weather in the northern portion of this territory east of the Mississippi conducive to a good demand for rubber footwear. I am optimistic regarding the future. I believe the demand for this class of goods is going to continue to increase right along. It is true that waterproofed leather goods has made inroads on the trade in heavy rubber shoes in the larger cities, but as an offset to this there is an increased demand for lighter rubber shoes. The population is increasing rapidly and the tendency to wear rubber shoes is increasing even more rapidly. Thus while the tendency to use waterproofed leather may be greater than before this increase in that line of business does not appear to be at the expense of the rubber trade. This season has

exceeded the record breaker of 1903-04 in volume, and the increased demand has come largely from Ohio, Indiana, Iowa, and other states in the southern part of my territory."

Mr. Charles B. Allen, western manager of the United States Rubber Co., said that he could only speak of the emergency business because the regular trade was supplied from the factory direct. "The season has been a little backward as far as the regular territories supplied by us with emergency shipments," said Mr. Allen. "This applies to the north and northwest, but the south and southwest has more than made up for this. Kansas City, St. Louis, and Tennessee points more than offset this. These points have made an almost unprecedented demand on us for emergency stocks, because of the sudden drop in the temperature in the southern part of the country and the successive freezing and thawing during the winter months all through Tennessee, Missouri and adjoining states. The demand kept us busy. In the states further north the breaking up of winter came late. In fact the demand is just beginning to be felt to any considerable extent now. Taken as a whole the volume of emergency business will exceed that of last season I think. Of course this indicates that the regular stocks have been exhausted."

## VAIN SEARCH FOR RUBBER SUBSTITUTES.

**T**HE seeker after "artificial gold" has been succeeded by the man who would supplant nature in the production of rubber. The Akron (Ohio) *Times-Democrat*, in an article on "The Long, Vain Search for Substitutes for Rubber," says that the leading rubber concerns of that town, while examples of great industry, annually blight the prospects of many great fortunes. It has been estimated that at the laboratory of a single rubber company in Akron as many as 200 substitutes are "weighed and found wanting" in a year. North, east, south, and west, men find before them substances for which no other use is apparent, and immediately they think that these must be suited for rubber substitutes.

It may be the sap of a plant. The discoverer finds that, on being exposed to the air, it becomes sticky. As the *Times-Democrat* expresses it:

"That is enough for him. He sees a fortune within his grasp and refrains from telling even his closest friend of the method by which he intends to become a millionaire in a few weeks, at the longest. He carefully gathers up a supply of the plant, and ships them away to be tested, and then he sits down and plans what he will do with his money. There is an ominous silence for a time, and then there comes back a letter, short and regretful, and that is the end.

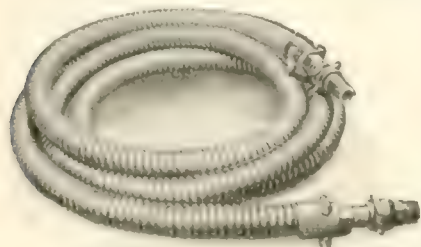
"So optimistic are these discoverers sometimes, that when they receive the letter telling them that their hopes were in vain, they refuse to believe the truth, and they suspect that the rubber company or the chemist who has made the tests, is trying to swindle them, and there are cases in which attorneys have been retained and preparations have been made to begin suits in the courts, over weeds and plants that have absolutely no value in the rubber business or any other."

**VENEZUELAN RUBBER LANDS FOR BOERS.**—General Samuel Pearson, late of the South African Republic, but who has resided in the United States for most of the time since the success of the British arms in South Africa, has been recently in Venezuela, whence reports come that he has concluded negotiations with President Castro for a concession of lands comprising 70,000 square miles, said to be rich in India-rubber and mahogany, on which to found a colony of Boers and Irish.

## NEW GOODS AND SPECIALTIES IN RUBBER.

## FLEXIBLE STEAM ARMORED HOSE.

TWO illustrations here relate to the most recent development in the armoring of hose for the transmission of steam or air. The inconvenience and loss, to say nothing of frequent danger, which follow the rupture of non-armored steam hose are too well appreciated to require



COIL OF FLEXIBLE HOSE.

wound spirally in such manner as to give extreme flexibility. The strength of the hose thus armored is greatly increased, because the steel armor binds the rubber pipe and consequently prevents it from expanding, the expansion of unprotected hose being a most serious defect. A three-ply hose with the new armor will, it is asserted, withstand a hydraulic pressure of 2000 pounds. With this protection assured a much longer life of the rubber results. Even if a crack in the rubber should

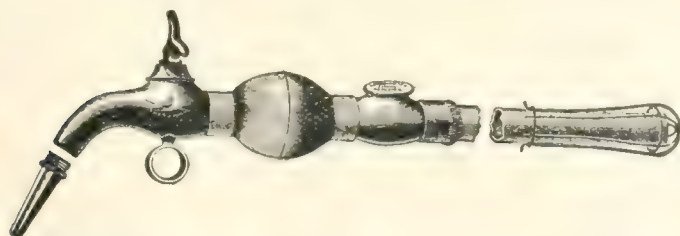


VIEW OF ARMOR CONSTRUCTION.

occur, the armor binds the rupture so tightly that little pressure is lost, whereas in hose less well protected there would be total loss of pressure. A merit of the new style of hose is that timely warning may be had in a case of break, and the work, may go on as usual until it is convenient to replace the old hose with a new piece. The new steel armor is referred to as absolutely preventing the flattening or kinking of hose, and maintaining a uniformity of internal diameter under all conditions. This hose is designed to be used wherever steam or air hose is now used—on railway trains, in mining and excavation work, and in the use of machine tools of every type. [Sprague Electric Co., No. 527 West Thirty-fourth street, New York.]

## SIERSDORFER PATENT AUTOMATIC SYPHON.

THE use of this syphon simplifies and lessens the work of



drawing liquors and effects a great saving by the prevention of waste, besides which it obviates boring holes in barrels for faucets and vents, and barrels not thus damaged will net the

dealer more when empty. If, when engaged in drawing liquors, one should suddenly be called away, it is necessary only to shut off the flow and on the return at any time the syphon will flow as before without re-starting. The Siersdorfer syphon is used extensively by wholesale and retail druggists and oil dealers for drawing off all varieties of light bodied oils, extracts, and the like. A bottling attachment accompanies each syphon for bottling direct, from the cask, barrel, or keg, and the largest or smallest bottle may be used. Special attention is called to the advantages which this syphon offers for bottling milk. The syphon possesses a strainer and check valve, the combined action of which permits fluids of whatever description to be drawn in a perfectly clear state. This syphon is referred to as being easily and thoroughly cleaned, with very little expense of time. The bulb and tubing are of a good quality of rubber; the metal parts are nicked. The sole owners of the patent and manufacturers are the Tyer Rubber Co., Andover, Massachusetts.

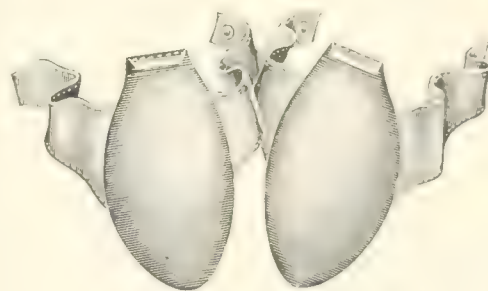
## A BOON TO THE BOW-LEGGED.

It is due to an inventor in the rubber trade that the enthusiastically bow-legged man need

no longer have his trousers cut with a circular saw, but may purchase "ready-mades" and be assured of a fit. The invention which will gladden the heart of those whose knees are strangers to each other is in the nature of a light, elongated rubber bag, somewhat similar to certain articles that flat-chested individuals of the opposite sex use for a purpose that is not here under discussion. With one of these attached to each leg, worn within the trousers, limbs before separated are apparently united, and a bow-legged Caliban becomes a straight-limbed Apollo. And why should the



BEFORE AND AFTER USE.



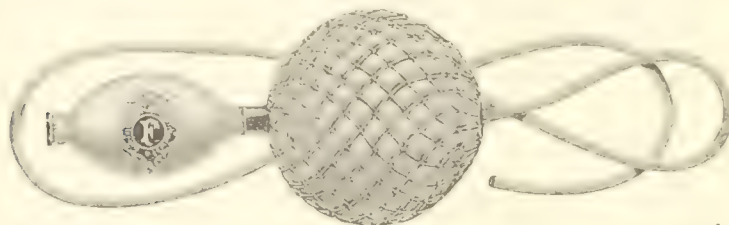
ALISON'S PNEUMATIC FORM.

shape of the lower limbs mar the appearance of the most correctly dressed men? The pneumatic "Leg Forms" invented by Dr. Alison are made of rubber, encased in satin covers, and so worn as to fill out an unnatural bend. They are made in rights and lefts, each pair being selected or made to the special requirements of the individual to be fitted. The Forms are inflated to suit the case, and are referred to as being light and so comfortable that the wearer soon becomes unconscious of their presence. While the utmost pains is taken by the manufacturers not to reveal any customer's identity, it can be no breach of confidence to mention here the source of supply of this novelty—The Alison Co., No. 94 West Mohawk street, Buffalo, New York.



## THE "FAULTLESS" PYROGRAPHY BULB.

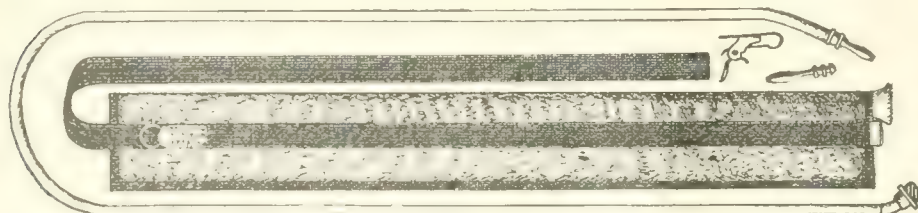
THE interest in pyrography continues to be so well sustained that the production of the outfits used, which formerly were for the most part imported, is becoming more and more of interest in the United States. This art, concisely speaking, is simply the drawing of ornamental designs on wood, leather, or other material, with a red hot platinum point. An "outfit" includes, besides the point and its handle, a benzine bottle and a rubber bulb (or bellows), the whole being connected by rubber tubing. An alcohol lamp is also used, for heating the platinum point. The bulb is at one end, the bottle in the center, and the point at the other end. The cut herewith illustrates a bulb which is seamless in construction, as also is the second-



ary bulb, or air reservoir, which is the larger of the two. The manufacturers of this bulb (The Faultless Rubber Co., Akron, Ohio) state that so far as they know there is nothing similar on the market, the bulbs in the imported outfits being of the seamed or hand made construction, and therefore liable to open where joined together. This is said to be particularly true of the reservoir, which is made of very light stock. Whereas most usually the heat of the point used in pyrographic work is regulated by the slow or quick pressure of bulb by the left hand, outfits are also supplied, involving foot attachments, which convert the bulb into a bellows, these bulbs being larger than those used in hand work.

## COMBINED WATER BELT AND FOUNTAIN SYRINGE.

A NEW invention relates to a hot or cold water belt and fountain syringe combined. The idea is to apply hot or cold water to any part of the body, as desired, the essential feature being a belt of rubber, with a capacity of one gallon, fitted with an adjustable webbed girdle, and covered with Scotch flannel. But however small the quantity of water used, it becomes equalized around the body by a slight pressure of the girdle. Thus it may be worn under the clothing, at home, in the office, or on the street. The attachment of a tube to the filling plug enables the Belt to be used as a fountain syringe, if desired. The



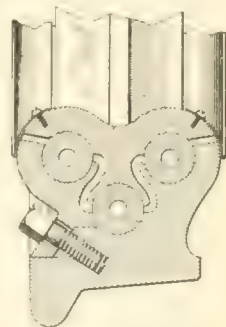
invention is the subject of United States patent No. 765 472, granted July 19, 1904, to Dr. Thomas O. Gasaway and Jacob S. Aydetotte. This has been purchased by the Hydro Girdle Co. (Marion, Indiana), who have manufactured the article since September last. The company are incorporated under the laws of Indiana, with \$15,000 paid up capital, and the officers are: Fred W. Wilson, president; Fred O. Gephart, vice president; and C. C. Gordon, secretary and treasurer.

## RUBBER TIRE INVENTED BY A BRAZILIAN.

A DISTINCT novelty in the field of rubber invention is a vehicle tire designed by a Brazilian. One is accustomed to

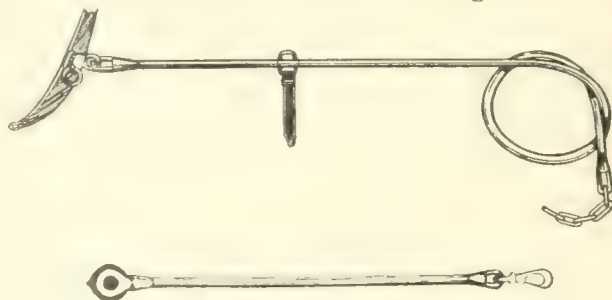
thinking of the citizens of that republic as interested in rubber only in its crude state, but Brazil is a very extensive country, and Senhor Benjamin Gastal, the inventor of the tire illustrated herewith, lives far south of the rubber producing district—in Pelotas, a city of 45,000 population, in the state of Rio Grande do Sul. His invention is the subject of United States patent No. 772,930. It is, in fact, described as a "vehicle wheel" rather than a tire, but the essential feature is a plurality of rubber tubes (not pneumatic), the object of which is to produce a resilient effect.

The circumferential portion of the wheel is described in the patent specification as a "rim," the materials used not being referred to. This is in sections, as will be seen from the drawing in cross section, a system of screws being employed to keep them together. These sections are so placed, however, as to render them not liable to contact, with a view to having all vibrations taken up by the three—or more—cushion tubes of rubber, the position of which is clearly shown. They are intended also to reduce noise to a minimum. The members of the rim are referred to as (1) the "spoke section," (2) a "removable side" (in which engages the larger screw shown in the drawing), and (3) a "tread section," the adjustment of which parts one to another is designed to prevent any one of them from becoming disconnected in a transverse direction.



## THE CABLE TRACE.

THE illustrations relate to a new article designed to take the



place of the leather trace, with a view to remedying troubles with which every team owner is familiar. Leather traces are expensive to begin with, and, owing to exposure to the elements, hard to keep in proper condition, while any roughening of their surface due to breaks irritates the horse. The cable trace is made of  $\frac{3}{8}$  inch steel cable, covered with a coating of rubber  $\frac{1}{4}$  inch thick, which gives a surface that is absolutely smooth, and as the trace is round there is nothing about it to injure the horse.

There are no stitches and nothing to rip; there is no stretch and no trouble from the weather; they are strong, light, and flexible, and always look well, the rubber being black. The cable martingale, or choke strap, is practically the same in construction, and has all of the commendable features of the trace. [The Ohio Rubber Co., Cleveland, Ohio.]

FRANCE.—The French chamber of deputies, on January 16 adopted a resolution requesting the government to make arrangements for an international automobile exhibition to be held in 1907.

## RECENT RUBBER PATENTS.

## UNITED STATES OF AMERICA.

ISSUED FEBRUARY 7, 1905.

- N**O. 781,649. Fountain pen. R. A. Hamilton, Seymour, Conn., assignor of one-half to J. P. Lein, New York city.
- 781,683. Combined apparatus for exercising and massaging by friction. G. H. Shepherd, Paris, France.
- 781,720. Car heating system. R. H. Gold, Chicago.
- 781,881. Filler for rubber. [Fibers from delimed bone.] J. R. Hunter, assignor to W. H. Smith, both of Philadelphia.
- 781,929. Implement for tapping or bleeding India-rubber or other trees. H. V. Bagot, Kalutara, Ceylon, assignor to Eastern Produce and Estates Co., Ltd., London, England.
- 781,939. Collapsible vessel. W. M. Fulton, Knoxville, Tenn.
- 781,952. Hose-coupling. A. A. Jones, Turtlecreek, Pa.
- 782,001. Vehicle wheel [with elastic tire.] J. N. Byers, assignor of one-half to W. R. Ramsey, both of Urbana, Ohio.
- 782,108. Apparatus for administering anesthetics. R. C. Coburn, Upper Sandusky, Ohio.
- 782,155. Pneumatic tire. C. W. Maxon, West Bay City, Mich.

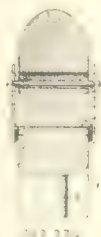
## Trade Marks.



- 44,159. Bath mats, rim grips, and supporting devices for the same. John H. Pugh, Philadelphia. *Essential feature.*—The representation of a portion of a bath room, illustrating a bath tub in position on the floor, a rim grip on the bath tub, and a bath mat suspended from the wall over the bath tub. Used since Oct. 1, 1904.

ISSUED FEBRUARY 14, 1905.

- 782,232. Composition of matter and process of making it. [An electric resistance material formed by combining graphite, carborundum, sulphur, and India-rubber or Gutta percha, and then vulcanizing and carbonizing the same.] B. F. Gardner, assignor of one-half to C. W. Woolner and S. Woolner, all of Chicago.
- 782,318. Vehicle tire. S. G. Board, Manchester, England.
- 782,379. Rubber tire. C. H. Bryan, Chicago.
- 782,388. Finger-hold for penholders. B. B. Goldsmith, New York city.
- 782,461. Lawn hose support. H. S. Parker, assignor of one-half to J. F. Matthews, both of El Reno, Okla.
- 782,555. Hose coupling. S. W. Gooch, Brilliant, Ohio.
- 782,560. Elastic power-transmitting device. G. H. Harris, Stockton, Cal.
- 782,595. Hose coupling. W. J. Bulger, Jr., Gouverneur, N. Y.



782,617.

- 782,617. Hose rack. S. Mellinger, Mount Pleasant, Pa.
- 782,715. Rubber for massage implements. J. Barker, Philadelphia.
- 782,727. Wheel. [With resilient tire]. R. S. Cutter, Ochiltree, Tex.
- 782,728. Wheel. [With resilient tire]. *Same.*
- 782,780. Bottle stopper. E. P. Dole, Honolulu, H. T.

## Trade Marks.

- 44,188. Rubber boots, shoes, and goloshes. Ostasiatische Handelsgesellschaft, Hamburg, Germany. *Essential feature.*—The representation of a sea horse in an oval. Used since Jan. 4, 1904.
- 44,189. Waterproofed cloth. Fulton Bag and Cotton Mills, Atlanta, Ga. *Essential feature.*—The word SHUREDRI associated with the representation of an eagle carrying a bag. Used since June 1, 1904.

ISSUED FEBRUARY 21, 1905.

- 782,870. Toy. F. A. Neville and A. Hodges, Meredosia, Ill.
- 782,897. Boiler tube cleaner and actuating means therefor. [Comprising rubber hose for admitting steam.] W. L. Cassaday, South Bend, Ind.
- 782,912. Tire casing. J. O. King, assignor of one-half to T. M. Kearney, W. D. Thompson, and P. J. Myers, all of Racine, Wis.
- 782,913. Tire casing. *Same.*
- 782,914. Vehicle tire. W. Langmuir, New York city.
- 783,012. Swimming device. A. Biedermann and J. Howald, San Francisco.

- 783,058. Lever apparatus for mounting pneumatic tires upon wheel rims. A. Michelin, Paris, France.
- 783,108. Hose clamping tool [For clamping wire loops on hose.] R. P. Decker and H. S. Covey, Chicago.
- 783,115. Garment pad. G. Goldman, Baltimore.



783,128.

- 783,128. Powder atomizer. R. A. Oleshak, Philadelphia.
- 783,140. Machine for making tubes. T. Scherf, Elizabeth, N. J.
- 783,218. Sand blast apparatus [comprising rubber hose pipes]. J. D. Murray, San Francisco, Cal., assignor to International Sand Blast Co., a corporation of California.



783,219.

- 783,219. Pneumatic tire. H. A. Palmer, Erie, Pa.
- 783,226. Artificial limb. J. E. Seeley, assignor to W. W. Sweeney Co., both of Los Angeles, Cal.
- 783,231. Hygienic telephone receiver. L. Steinberger, New York city.
- 783,289. Protector for pneumatic tires. E. La pisse, Elbeuf, France.



## Trade Marks.

- 44,224. Storm shield. American Storm Shield Co., St. Louis, Mo. *Essential feature.*—The name H.-RVEY being the facsimile signature of Charles M. Harvey, associated with the picture of a vehicle having a storm-shield closing its front and mounted upon a shaded background. Used since Dec. 1, 1904.

ISSUED FEBRUARY 28, 1905.

- 783,466. Artificial limb. S. Rosenfelder, Nuremberg, Germany.
- 783,469. Clamping device for pneumatic tires. M. C. Schweinert, West Hoboken, N. J., and H. P. Kraft, New York city.
- 783,567. Safety tread horseshoe. B. Braun, Brooklyn, N. Y.
- 783,574. Cord for the manufacture of rubber fabric. C. H. Gray, Silvertown, and T. Sloper, Devises, England; said Sloper assignor to said Gray.
- 783,606. Apparatus for drying the face. L. P. Bowen and W. J. White, Auburn, N. Y.
- 783,628. Woven elastic fabric. H. J. Gaisman, New York city.
- 783,710. Rubber compound [including as its chief ingredient a distillate of resin]. E. W. Strain, Philadelphia.
- 783,720. Pneumatic tire. F. E. Case, Canton, Ohio.
- 783,754. Harness pad for horses. E. L. McClain, assignor to The American Pad and Textile Co., Greenfield, Ohio.



783,720.

- 783,793. Tire. C. Miller, Binghamton, N. Y.
- 783,811. Bath suit bag. W. A. Allen, New York city.

- 783,833. Antivibration pneumatic cushion ["for elastically distancing two substances," as wheel axles and vehicle bodies]. L. Harris, London, England.



783,839.

- 783,839. Rubber boot. E. Kendall, San Francisco.
- 783,858. Pneumatic tire. [The "Samson" leather protector for tires.] A. Frey, assignor to Société Anonyme des Pneumatiques Cuir "Samson," Paris, France.
- 783,926. Cushion tire attaching means. Mary E. Brooke, Denver, Col.



783,793.

## Trade Mark.

- 44,261. Rubber hose, rubber belting, and rubber packing. The Mechanical Rubber Co., Jersey City, N. J., and Chicago. *Essential feature.*—The representation of an elephant. Used since July 1, 1882.



## GREAT BRITAIN AND IRELAND.

## PATENT SPECIFICATIONS PUBLISHED.

The following patents have been added to the Patent at the filing of the Application, which in the case of those listed below was in 1903.

\* Denotes Patent for American Inventions.

[ABSTRACTED IN THE OFFICIAL JOURNAL, FEBRUARY 8, 1905.]

- 21,362 (1903). Waterproof coat for sportsman's use. H. J. Nicholls, London.
- 22,634 (1903). Electric coupling. [Terminals for stranded wires, consisting of vulcanite.] F. H. de Veuille, Aston, Birmingham.
- [ABSTRACTED IN THE OFFICIAL JOURNAL, FEBRUARY 15, 1905.]
- 22,682 (1903). Tire inflator. G. Leitner and two others, Stettin, Germany.
- \*22,732 (1903). Atomizer [for medicinal use]. T. de Vilbiss, Toledo, Ohio.
- \*22,773 (1903). Inhaler [for administering anesthetics]. F. M. Richardson and J. M. Fields, Chicago, Illinois.
- 22,774 (1903). Revolving heel protector. W. Barber and F. Johnson, London.
- 22,826 (1903). Ventilating device for India-rubber waterproof fabrics. E. Frankenberg, Hanover, Germany.
- 22,968 (1903). Golf club [with resilient handle, having a rubber center]. D. Williams, Swansea, and another.
- 22,985 (1903). Pneumatic wheel [comprising a tire automatically inflated while the vehicle is in motion]. F. C. Weisse, Leipzig, Germany.
- 22,986 (1903). Artificial caoutchouc [formed by allowing the ferment from virgin Caoutchouc to react with coal tar]. L. L. A. Seguin and J. F. G. de R. de Sales, Paris.
- 23,002 (1903). Golf ball. C. de Buren, Geneva, Switzerland.
- 23,052 (1903). Leather protective tread for pneumatic tires. G. Desclée, Jemeppe, Belgium.
- 23,073 (1903). Life saving garment. E. Mangepan, Paris.

[ABSTRACTED IN THE OFFICIAL JOURNAL, FEBRUARY 22, 1905.]

- 23,404 (1903). Metal tread protector for pneumatic tires. S. Butler, Westbury-on-Trym.
- 23,408 (1903). Pneumatic hub for vehicle wheels. E. B. Killen, Bangor, County Down.
- 23,427 (1903). Elastic tire. [Two similar rubber tires are secured in position side by side, by means of side rings connected by bolts and projecting flanges formed on the metal wheel rim; for use on heavy vehicles.] C. Challiner, Manchester.
- \*23,743 (1903). Typewriter eraser. H. B. Hooker, New York.
- 23,531 (1903). Tire inflator [designed to be operated by the motion of the vehicle]. J. Mitchell, Wallingford.
- \*23,736 (1903). Nasal inhaler. C. K. Tetter, Upper Sandusky, Ohio.
- 23,786 (1903). Rubber composition [for waterproofing wood, cardboard, felt, and other fibrous or porous materials]. T. Gare, New Brighton, Cheshire.
- 23,793 (1903). Machine for wrapping or rolling rubber sheets into the form of tubes [as tire inner tubes, hose pipe, circular packing and the like]. R. Bridge, Castleton Iron Works, Castleton, near Manchester.

[ABSTRACTED IN THE OFFICIAL JOURNAL, MARCH 1, 1905.]

- 23,946 (1903). Stethoscope. H. G. A. L. Wieders, London.
- 23,911 (1903). Pneumatic tire [with puncture preventing band within the outer cover]. E. Alexander, Paris, France.
- 23,994 (1903). Pneumatic tire [with metallic puncture preventing tread]. P. W. Fawcett and E. L. W. Bellhouse, Sheffield.
- \*24,035 (1903). Pneumatic tire. C. A. Allison, London. (Fawkes Rubber Co., Denver, Colorado).
- \*24,036 (1903). Mold for forming pneumatic tires. Same.
- \*24,062 (1903). Method of manufacturing seamless toy balloons. V. F. Feeny, London. (Rubber Balloon Co., Brooklyn, New York).
- 24,122 (1903). Fabric for hose pipes. C. L. Marshall, Surrey.
- \*24,155 (1903). Fountain pen. W. I. Ferris, Stamford, Connecticut.
- \*24,156 (1903). Fountain pen. Same.
- \*24,185 (1903). Rubber jointed toys [comprising elastic cords]. A. Schoenhut, Philadelphia.
- 24,269 (1903). Reservoir pen. G. Pan, Hamburg, Germany.
- 24,279 (1903). Spray producer for applying paints. J. and L. C. Wallach, London.
- 24,318 (1903). Medicine tube for horses. W. H. Flook, Rickmansworth, Hertfordshire.

- 24,322 (1903). Protected pneumatic tire. E. B. Killen, Bangor, County Down.
- 24,323 (1903). Tobacco pipe and tube cleaner. B. Williams, Birmingham.
- 24,429 (1903). Ink or color distributor. J. N. Malloch, Bridgend, Perth.

## THE GERMAN EMPIRE.

## PATENTS GRANTED.

- 158,179 (Class 63e). Pneumatic tire, with separate air tubes lying one within another. A. Chambollé, Bordeaux, France. Dec. 29, 1904.
- 158,922 (Cl. 8d). Wringer rolls composed of sectional rings set side by side and provided with a rubber covering. C. Kampmann, Jr., Mühlhausen a/d Ruhr. Feb. 1, 1905.
- 159,043 (Cl. 77a). Exerciser or chamber gymnastic apparatus. Industrie-werke für Heilgymnastische Apparate, Maschinen, und Metall-waaren, G. m. b. H., Solingen. Feb. 1.
- DESIGN PATENTS GRANTED [GEBRAUCHSMUSTER.]
- 239,686 (Class 3b). Suspenders having elastic parts. Ehrhardt & Demme. Dec. 29.
- 239,102 (Cl. 47b). Metal wheel with cogs of hard rubber. P. Stegman, Berlin. Dec. 29.
- 242,088 (Cl. 30b). Rubber holder for dental purposes. The S. S. White Dental Mfg. Co., G. m. b. H., Berlin. Feb. 1.
- 242,302 (Cl. 64b). Fruit jar ring. J. Weck, G. m. b. H., Oeflingen. Feb. 1.
- 242,540 (Cl. 3b). Suspenders with elastic button loops. A. Philipson, Copenhagen, Denmark. Feb. 8.
- 242,833 (Cl. 3b). Girdle of rubber stuff. A. Ebenstein, Berlin. Feb. 8.
- 242,845 (Cl. 3b). Elastic-suspender girdle. J. Heymann, Furth i/B. Feb. 8.
- 242,947 (Cl. 3b). Adjustable collar stiffening of elastic material. Frau Simon, Berlin. Feb. 8.
- 243,342 (Cl. 71a). Rubber cushion for boot heels. G. Looms and The Pneumatic Rubber Sole and Heel Syndicate, Ltd., Leicester, England. Feb. 15.
- 243,343 (Cl. 71a). Rubber sole. Same. Feb. 15.
- 241,429 (Cl. 36a). Hard rubber spiral nozzle. A. Hendel, Berlin. Feb. 15.
- 241,652 (Cl. 3d). Pneumatic bust forms. J. Michel, Bremen. Feb. 15.
- 241,488 (Cl. 33a). Elastic ring for umbrella covers. G. Wingensfeld, Düsseldorf-Oberkassel. Feb. 15.

## PATENT APPLIED FOR.

- 14,869 (Cl. 39b). Hose connection. F. E. Paradis, Chicago, Illinois. Dec. 29.

## THE FRENCH REPUBLIC.

## PATENTS ISSUED (WITH DATES OF APPLICATION).

- 346,825 (Oct. 5, 1904). G. Bouissieren. Process for making aseptic plastic materials to be used for rubber surgical instruments, gum taffeta, and Caoutchouc fabrics.
- 348,828 (Oct. 5). E. Pouzin. Device for pneumatic tires for vehicle wheels.
- 346,853 (Oct. 7). W. A. Hollis and H. S. Hollis. Pneumatic tires and method of inflation.
- 346,875 (Oct. 7). G. Desclee. Anti-skidding device and protector for pneumatic tire covers.
- 347,053 (Sept. 17). Chavas. Wheels with pneumatic tires for same.
- 347,071 (Oct. 11). E. Benin. Pneumatic tire, comprising several air chambers.
- 347,155 (Oct. 17). Société Fortier, Beaulieu et Sauvegrain. The use of leather with the hair on for outer pneumatic tire protectors.
- 347,181 (Oct. 18). H. Harrison. System for repairing pneumatic tires.
- 347,244 (Dec. 28). Goud Berlioz & Co. Anti skidding and protective cover for pneumatic tires.
- 347,272 (Aug. 16). H. Lutz. Wheel tire.
- 347,485 (Oct. 20). H. H. Frost. Vulcanizing apparatus.
- 347,493 (Oct. 29). H. E. A. Vittenet. Artificial wax and process of manufacture.
- 347,559 (Oct. 21). J. Billet. Supporting, protective, and anti skidding cover for pneumatic and other tires.
- 347,742 (Nov. 8). V. Mazillier. Double air tube for tires.

[NOTE.—Printed copies of specifications of French patents may be obtained from R. Bobet, Ingenieur-Conseil, 16 avenue de Villiers, Paris, at 50 cents each, post paid.]

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Every foot guaranteed  
in strongest possible  
manner.

We make everything in rubber.



Our warrant is indelibly  
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to protect the user.

Write for catalog and prices.

THE MECHANICAL RUBBER COMPANY,  
CLEVELAND, OHIO.

## OBITUARY RECORD OF THE MONTH.

JOSEPH P. EARLE.

**J**OSEPH PITMAN EARLE, long widely known in the crude rubber trade and in New York club circles, died in his fifty-eighth year at his residence, Duck Cove Farm, Wickford, Rhode Island, on March 2. Owing to ill health he retired from active business in 1896, and afterward spent most of his time on his farm. Since 1899 he was confined to a rolling chair, a cripple from locomotor ataxia, and although his sufferings must have been great at times, he never complained, but tried to cheer those who were with him during his long illness. He was optimistic to the last as to his recovery, and was constantly making plans for reëntering the crude rubber business. Since early in February a rapid decline in his general health was noticeable. His end was peaceful.

He was graduated from Brown University in 1871, and in the same year, with Mr. Henry Smythe, of New York, formed the firm of Smythe, Earle & Co., brokers in India-rubber, which firm was dissolved in 1877, and was succeeded by Earle Brothers. It was largely due to his advice that the firm of W. R. Grace & Co. entered the rubber market as important factors in 1878, and up to 1886, when the New York Commercial Co., Limited, was formed by Mr. Earle and his associates, Messrs. Grace & Co. based many of their large operations on Mr. Earle's judgment and knowledge of the market.

It was largely through Mr. Earle's instrumentality and on account of his intimate acquaintance with the rubber manufacturers and with important financial houses that the United States Rubber Co. was formed, in 1892, and soon after it was he who conceived the best plan of bringing about the consolidation that was formed in the mechanical rubber goods trade.

In 1891 he visited Pará on business and in 1893 he went to La Paz, Bolivia, in order to further develop the Bolivian crude rubber industry. There he was taken sick, either, as he thought, through having been poisoned, or, as is more likely, through the perils of the tropical climate. He never again recovered his former good health.

Although thoroughly devoted to business, Mr. Earle took a keen interest in many sports. At college he was considered one of the best baseball players, and later was a popular oarsman and gymnast. He was an enthusiastic hunter, and also took much pleasure in yachting. Many of his friends remember the enjoyable times they had on his sloop yacht *Gracie*, and acknowledge that as a generous host he had few equals. While for a long period he was considered the leading spirit in the crude rubber market, this did not prevent his devoting a good deal of time to social life, his tact and sympathetic nature making him a favorite with all who came in contact with him. He always remained a bachelor. He became a member of the First Baptist church of Providence, R. I., in 1866.

He was descended from Puritan stock, through Captain

Ralph Earle, who came to America from Exeter, England, in 1634, and settled in Newport, R. I. His remains were buried at Swan Point cemetery, Providence, on March 6, the services being conducted by the Rev. Dr. W. H. P. Faunce, president of Brown University, of which institution Mr. Earle had been a trustee since 1888.

JOHN C. BALDERSTON.

**J**OHN C. BALDERSTON died at his home in Boston on March 21. He was born in September, 1831, in Baltimore, Maryland, where he grew up and engaged in the boot and shoe jobbing business, founding the house of Balderston, Ward & Co., which continued until 1877. In that year he removed to Boston and formed a copartnership with the late Charles M. Clapp, under the name Clapp & Balderston. The firm later became Balderston & Daggett, and took the selling agency for the National Rubber Co. (Bristol, Rhode Island), of which Mr. Balderston became a director. With the reorganization of this company in 1887, as the National India Rubber Co., with Colonel Samuel

P. Colt president and treasurer, Mr. Balderston became vice president of the company, in charge of the Boston store, No. 28 Lincoln street. Upon the merger of the company in the United States Rubber Co., in 1892, Mr. Balderston retired with a competency, and has since led a life of leisure in his home, No. 473 Beacon street. For several years his health had been failing, and last year he had a severe illness. Funeral services were held on March 24, being conducted by the Rev. W. H. Dewart, a former assistant rector of Trinity church, in which Mr. Balderston was long a pew holder. The pallbearers were Charles H. Quincy, the Hon. Augustus O. Bourn, John Brooks, William A. Rust (president of the Freeman's National Bank), William T. Lambert, and Dr. Daniel W. Cheever (a brother of the late John H. Cheever, of the rubber trade). The interment was at Forest Hills cemetery. A widow, four sons and two daughters survive,

the eldest son being Frank D. Balderston, manager of tennis sales for the United States Rubber Co.

ANDREW ALBRIGHT.

**A**NDREW ALBRIGHT, president of the Rubber and Celluloid Harness and Trimming Co., and one of the best known citizens of Newark, New Jersey, died of apoplexy on March 17 at Sea Breeze, Florida, where he had gone three weeks before in apparent good health himself, in company with his wife, who was not well. Mr. Albright was born June 23, 1831, at Dryden, Tompkins county, New York, where his father was a successful farmer. He was educated in the country schools and remained on his father's farm until over 30 years of age, during which time he gave much attention to the improvement of farm implements.

The idea of inventing a cheap and durable covering for harness buckles interested him so much that he went to New Jersey to carry on his experiments near a rubber factory. After much experimenting he obtained a patent [No. 62,106—Febru-



THE LATE JOSEPH P. EARLE.



ary 12, 1867] for a special process for the coating of metal with rubber and his goods were made by the Novelty Rubber Co. (New Brunswick, N. J.) until 1869, when he established himself at Newark in the manufacture of harness buckles and trimmings under his patent. Later he obtained other patents, both for vulcanizing processes and for the special dies used in making his products.

After some years a contest arose with the Celluloid Harness Trimming Co., which had been formed in 1873, over an alleged infringement of patents, the result of which was a consolidation of interests and the organization of the present stock company, December 1, 1877, with Mr. Albright owning a majority of the shares and filling the office of president. The capital stock of the new corporation was increased in 1889 to \$500,000. His only son, Andrew Albright, Jr., has been vice president and William McMurtry treasurer. The business has been very successful, and while Mr. Albright was not in the habit of talking freely about his affairs, his fortune has been locally estimated at between \$500,000 and \$750,000. He owned a handsome residence at No. 727 High street, and considerable other Newark real estate.

Mr. Albright was well known for the assistance which he gave to inventors whom he considered deserving, and it is said that many men upon whom he conferred substantial financial aid have perfected inventions of great benefit to the public. He took an active interest in the Newark Library Association and also in politics. Mr. Albright is survived by his widow, who was Mrs. Philemon B. Strong, of Dryden, N. Y.; by his son above mentioned, and a daughter, Mrs. G. J. Spur, of Newark; also by a stepdaughter, Mrs. R. J. Maches, of Newark. There were funeral services at the late home of the deceased, on March 22. Andrew Albright, Jr., will become president of the company.

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#### EUGENE F. PHILLIPS.

EUGENE F. PHILLIPS, who died at his home in Providence, Rhode Island, on February 22, was one of the founders of the insulated wire industry in America and at the time of his death was identified with one of the most important establishments in this industry. Mr. Phillips was born in Providence on November 10, 1843, his father being David Greshen Phillips, and was educated in the public and high schools of that city. His course at the high school was interrupted by a term of service in the Tenth Rhode Island volunteer regiment during the civil war. After the war Mr. Phillips was interested at various times in banking and other business until 1870, when he began in a small way to insulate telegraph wires, in a barn in the rear of his residence. The business thus founded grew steadily with the development of the electrical business

until, in 1882, the name was adopted of the American Electrical Works, which has now become one of the largest companies of the kind in the country. In 1893, the buildings formerly occupied no longer proving adequate, a new location was chosen on the Seekonk river, and the result was the growth of a village that was named Phillipsdale in Mr. Phillips's honor. Four or five years ago Mr. Phillips became a director and vice president, and later president, of the Washburn Wire Co. (Providence), while the leading officers of that company joined the Electrical Works board, since which time close relations have existed between the two companies. In 1889 Mr. Phil-



EUGENE F. PHILLIPS.  
Courtesy of *The Electrical World and Engineer.*

lips established a plant in Montreal, which is now the largest of its kind in the Dominion. Mr. Phillips married Miss Josephine J. Nichols, who survives, with two sons and a daughter, the sons being Frank F. and E. Rowland, who long have been active in the management of the Electrical Works, the former having been president of the company for some years past.

#### JAMES B. HENDERSON.

JAMES BUIST HENDERSON was born in Dundee, Scotland, on August 14, 1875; his early schooling was in Yorkshire, England, until his family moved to America, in 1886, and settled in Ludlow, Massachusetts. He attended the common schools of that town, and pursued his studies so diligently that he was admitted to the Massachusetts Institute of Technology in 1892, before his seventeenth year. As a boy he was quiet and rather reserved, but fond of football and cricket and a great favorite with his teachers and schoolmates. He devoted himself to his work, attacking each subject with energy and persistence until it was mastered, but continued his interest in athletics. In his senior year he secured an opportunity on the engineering staff engaged in the extension of the New Bedford Water Supply, and after graduation he went to a similar position with the Metropolitan Water Board at Clinton.



JAMES B. HENDERSON.

He went to the Boston Woven Hose and Rubber Co. in 1898. Here as elsewhere, his work was characterized by the same quiet earnestness and thoroughness. For some years he worked in the cost department on the costs and the specifications which control the manufacturing operations of the company. In 1902, after the death of Mr. Robert Cowen, the technical manager and the founder of the company, he was placed at the head of the technical department. In this capacity he had charge of the compounding of rubber stocks and of the large amount of experimental work which this process entails. His success in this work was marked.

He was married in Swampscott in 1901 to Miss Marion E. Lowd and lived in Cambridge until he moved to Arlington in 1903. It was while his house was building that his disease, diabetes, declared itself. He made a gallant struggle for life and health, but his strength failed until the end came suddenly on March 4. During all this time he kept at his work, though with gradually lessened hours and decreased responsibility. He died at the home of his parents, in Ludlow, where he had gone on a vacation urged by the management of the company.

The expressions of grief and sympathy for the bereaved wife and two little children and for the stricken parents and sister were numerous. The flag at the factory was half masted and the greatest concern and regard was expressed by his associates. One of the compensations of this terrible trial to his family has been the universal testimony of those who knew him, and particularly by his business associates, to his sterling worth.

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#### THOMAS ADAMS.

THOMAS ADAMS, who claimed to be the pioneer of the Chiclé chewing gum business, died at his home in Brooklyn, New York, on February 7. He was born in New York city, May 4, 1818, and during the civil war was photographer by appointment in the army of the Potomac, taking many photographs which have become famous. His son Thomas was with him at that time. During a visit to Mexico, after the war, Mr. Adams became in-

terested in Chicle gum (the product of *Achras sapota*), and became convinced that it was not a useless product of nature. In 1869 he began the manufacture, in a small way on Vesey street, of his "New York" chewing gum, in competition with the spruce chewing gum then so popular. He was successful, and the business began to expand. He obtained a patent in 1871, and in 1872 the "Tutti-fruti" was introduced, and other brands followed until they numbered a dozen or more. From Vesey street the business was removed to Murray street, New York, and thence in 1888 to Sands street, Brooklyn, where a very large establishment was erected. In May, 1903, the business was removed to Newark, New Jersey. First conducted by Mr. Adams under his own name, the business came in time to be known as Adams & Sons, succeeded in 1891 by the incorporated Adams & Sors Co. Meanwhile, other chicle chewing gum factories came into existence, and other patents were granted, and in 1899 six concerns were consolidated under the name American Chicle Co., with \$15 000 000 capital, which has proved one of the most successful industrial combinations in the country. Mr. Adams retired from active connection with the business several years ago, but his son Thomas Adams is chairman of the board of the American Chicle Co., and Henry Rowley, who was associated with the original Adams company, is secretary and treasurer. Mr. Adams is survived by a widow and seven sons and daughters. [See "The Basis of the Chewing Gum Trade," in THE INDIA RUBBER WORLD, November 10 1895—page 43.]

#### THE LATE MR. YEOMANS.

AT a meeting of the executive committee of the New England Rubber Club, on March 15, the following tribute to the late Almeron H. Yeomans, a member of the Club, whose death was reported in the last INDIA RUBBER WORLD, was adopted:

WHEREAS, Our friend and fellow member, Almeron H. Yeomans, has been removed from our midst by the hand of death, we, representing the New England Rubber Club, hereby adopt the following resolutions:

*Resolved*, That in the death of Mr. Yeomans our Association has lost one of its most loved and valued members.

*Resolved*, That the rubber industry as a whole has been deprived of one of its most respected and valuable members—upright, kindly, able, and the friend of all. Associated with great enterprises, widely known, an authority in his especial field, his passing has saddened all hearts; his memory is to us all a precious legacy.

*Resolved*, That we extend to his family our thorough appreciation of his high character and our heartfelt sympathy in their loss.

L. D. ABBLEN, President.  
ARTHUR W. STEDMAN, Vice President.  
GEORGE P. WHITMORE, Treasurer.  
HENRY C. PEARSON, Secretary.  
E. E. WADBROOK, Assistant Secretary.

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THE death is reported of Mr. T. P. BRUCE WARREN, chief chemist to the India Rubber, Gutta-Percha, and Telegraph Works Co., Limited (Silvertown, London), in his sixty-eighth year. Mr. Warren began as early as 1862 his connection with the production of electrical cables, with the founders of the present Hooper's Telegraph and India Rubber Works, Limited (London), and in 1875 began his connection with the Silvertown company, establishing the laboratory at the works and devoting the remainder of his life to its successful development. Besides his professional work, Mr. Warren was a frequent writer on technical subjects.

J. L. LYONS, for eight years salesman for the Home Rubber Co. (Trenton, New Jersey) on the Pacific coast and in the extreme Northwest, died on March 12 in Chicago of appendicitis. Mr. Lyons was born in Chicago 31 years ago, and was an exceedingly active and popular salesman. His devotion to

business was so marked that he refused to give up when first attacked, and kept about his usual duties until finally forced by his friends, to go to a hospital. His death came as a great shock to his many friends.

VICTOR C. VANT WOOD, 46 years old, president of the Vant Wood Rubber Co. (No. 88 Reade street, New York) a jobbing house in the druggists' sundries line, died suddenly of heart failure in a Brooklyn trolley car, on the afternoon of March 25, while nearing his home, No. 617 Hancock street. A widow and a daughter survive.

WE regret to have to record the death, in her eighty-second year, of Mrs. MARY KELLY VERMUELE, wife of Mr. John D. Vermuele, president of the Goodyear's India Rubber Glove Manufacturing Co., which occurred on Friday, March 17, at their home in Staten Island. Mrs. Vermuele was the daughter of Mr. Kelley, a prominent Philadelphia merchant, and was married in 1846. Funeral services were held at the Staten Island residence on Monday, March 20, and the interment was at Greenwood cemetery, Brooklyn.

#### BRITISH OPPOSITION TO THE METER.

THE British Weights and Measures Association "has been formed," one of its pamphlets states, "for the purpose of opposing the introduction of the meter or any of its derivatives into the United Kingdom, and for so standardizing and simplifying British weights and measures that we may obtain all the advantages the metric system gives, without the disadvantages."

The secretary, Mr. George Moores, F.S.S. (25, Victoria street, S. W., London) has forwarded to THE INDIA RUBBER WORLD some data showing the comparatively small area of the globe over which the metric system is in general use, and the slow growth of its introduction, and particularly the great preponderance of British trade with inch-using as compared with meter-using peoples. Doubtless a similar showing might be made in relation to the foreign commerce of the United States, But as is pointed out by the British association:

"The above considerations only take into account our export trade. Our home trade, which would also be revolutionized [by adopting the metric system], and that of our colonies and dependencies, is many, many times greater than the total export trade, whilst the ratio of home trade to export of the United States is reputed to be in the proportion of 95 to 5."

The India-rubber trade is represented in the executive committee of the British association named above by Mr. Robert Kaye Gray, managing director of the India-rubber, Gutta-percha, and Telegraph Works Co., Limited, and past president of the Institution of Electrical Engineers. Reference may be made here to the result of a canvass made by the National Association of Manufacturers of the United States, from which it appeared that its members were overwhelmingly opposed to any proposal to make the metric system compulsory in this country. Thirteen American rubber manufacturers were included among those whose views were expressed on that occasion. [See THE INDIA RUBBER WORLD, June 1, 1904—page 307.]

JAMES HOPES TO BECOME RICH.—James McNamara was down from Chicago over Sunday. James is interested in a new material to take the place of rubber, to be used as tubes, rails, etc. The new substance is a composition of some kind and is as hard as iron. A stock company has been formed to manufacture the new discovery, and James hopes to become a rich man through it.—*Maroa (Illinois) Times*.



## UNITED STATES CUSTOMS DECISIONS.

## RATE OF DUTY ON CRAVENETTE.

AN importer of certain woolen or worsted cloths known as "Cravenettes" protested against the action of the collector of customs at New York in assessing them under paragraph 369 of the Tariff act as "waterproof cloth," insisting that they should be classified either as "dress goods," under paragraph 395, or as "woolen or worsted cloths," under paragraph 392, on both of which classes the rate of duty is lower. The United States circuit court for the southern district of New York sustained the collector, whereupon the importers carried the case to the United States circuit court of appeals where, on March 3, a decision was rendered affirming that of the circuit court.

The decision states that the question to be determined is whether or not the imported merchandise was "waterproof cloth" under the provisions of the Act. "Cravenette" is cloth which has been subjected to a process invented to make it rain repellant. "Cravenette" is not absolutely waterproof; in this respect it resembles gossamer rubber cloth and other materials universally recognized as waterproof. Few so called waterproof cloths are absolute impervious to water. Practically and relatively Cravenette is waterproof. It would offer slight protection to a sailor constantly dashed with spray on the deck of a storm tossed vessel, but it would be a fair substitute for an umbrella and would keep the wearer dry in an ordinary shower of rain." The court quoted, as a practical and common sense trade definition of waterproof cloth the testimony of one of the witnesses: "From my standpoint as a manufacturer of waterproof garments, any cloth of which I can make a garment that will keep the wearer dry in a rainstorm is waterproof cloth." The testimony taken in the circuit court was to the effect that in texture and appearance Cravenette has all the characteristics of the waterproof cloth of commerce, its primary use being for mackintoshes and other waterproof garments, and that it is in fact one of the waterproof cloths of commerce. While the Tariff act does not specifically name this material, the court of appeals decide that under the act "any cloth—cotton, woolen, or mixed—which is subjected to a process which fills the interstices of the cloth and prevents water from going through is waterproof cloth."

With regard to the importers' contention that Cravenette be regarded as "dress goods" the court says: "A dress could, of course, be made of Cravenette, as one could be made of oilskin, assuming that a woman were found eccentric enough to desire such apparel. The evidence is, however, overwhelming that this cloth was rarely sold or used as dress goods, and that the predominant use was for the outer garments of men and women, intended to be worn in rainy weather. A few hundred pieces were at one time made in 46-inch width, and an unsuccessful effort was made to sell them as dress goods; but only 100 pieces were sold in three years, and the remainder was sold at a sacrifice. There can be no doubt that 60 inches was the standard width," whereas the average width of dress goods ordinarily sold is 45 inches.

Regarding the suggestion that the goods be admitted as "woolen or worsted cloths" under paragraph 392, the court rules that Cravenette, by means of the treatment to which it has been subjected "is taken out of the broad class of woolen cloths, and placed in the more precise and restricted class of waterproof cloths, the class made more precise by the addition of a new distinguishing characteristic."

The rate under paragraph 369 for "waterproof cloth," and thus made applicable to Cravenette is: "Valued at 25 cents or

less per square yard, 40 per cent. *ad valorem*; valued above 25 cents per square yard, 15 cents per square yard, and 30 per cent. *ad valorem*."

## DUTY ON RUBBER SPONGES IN THE UNITED STATES.

THE protest of the Alfred H. Smith Co. (New York) against the assessment of duty at the rate of 30 per cent. *ad valorem* on the importation of India-rubber sponges was overruled on February 27 by the Board of General Appraisers, the decision being written by Mr. Sharretts. The importers' contention was that the goods were properly classifiable under paragraph 82 of the Tariff act as "sponges," at a rate of 20 per cent. *ad valorem*. The collector of customs at New York had made his assessment under paragraph 450, which provides for "manufactures of rubber." The board decided that the articles were properly assessed. There are no statistics available in regard to the extent of the importation of rubber sponges into the United States. It may be mentioned, however, that the value of exports declared for this country from the port of St. Petersburg, Russia, during the fiscal year ended June 30, 1904, was \$47,363. Rubber sponges are also imported from Germany, but do not appear to have been separately listed in the consular statistics.

## A DECISION RE DRESS SHIELDS.

A DECISION rendered in the United States district court of Philadelphia reverses the United States board of General Appraisers in the matter of assessing duties on imported dress shields made of India-rubber and cotton, and affirms the board's decision as to shields of rubber and silk. It was established to the court's satisfaction that India-rubber is the material of chief value in the cotton and rubber shields, and that they are, therefore, dutiable as manufactures of rubber. On the other hand, silk being the material of chief value in some of the dress shields imported, they become dutiable as manufactures of silk.

## DISHING OF RUBBER TIRED WHEELS.

[FROM "THE CARRIAGE MONTHLY."]

AFTER wheels have been put away to dry for six months they are supposed to be ready for tires. They have about  $\frac{1}{8}$  inch dish on front spokes; when staggered  $\frac{3}{8}$  inch, and when tired will have  $\frac{1}{2}$  inch, or, the forward strain will be  $\frac{3}{8}$  inch and the amount of dish  $\frac{1}{4}$  inch. Take wheels on which the spokes have been strained forward by the size of the tires, put them in a room heated to 75 degrees, observe them at intervals for six months, and it will be found that they will gradually go back. We have seen them go back to the dish  $\frac{1}{8}$  inch as made by the wheel maker.

Such wheels had to have the tires cut and reset. Hot dry weather produces the same effect. The tires will become loose and necessitate resetting. A complete change takes place with rubber tired wheels. If left standing in the wareroom, it will gradually dish; and heavy wheels are no exception to the rule. Channel tires set the same as all steel, and iron tires went the same way, and the only remedy was to set them loose as possible to prevent their going into dish. Rubber tires appear to have the same effect on the iron and wood as the damp atmosphere. We are told that it is the strain of the rubber tires that affects the wheels. This is not plausible, because the channel can resist the rubber. The cause seems to lay in the rim only. Wheels built expressly for rubber tires with less depth to the rims dish less than those with the depth of the rim as made originally for steel tires. Before this cause was not known, channel tires were given the same draw as steel tires, but when they all went into dish the channels were set loose, and better results have been obtained.

## NEWS OF THE AMERICAN RUBBER TRADE.

## THE GOODRICH RUBBER SHOE DEPARTMENT.

ARRANGEMENTS have been completed whereby The Mishawaka Woolen Manufacturing Co. will sell the rubber boot and shoe output of The B. F. Goodrich Co. (Akron, Ohio). The Goodrich company will make everything in rubber footwear not now made at Mishawaka, so that the combined line will be very complete. The Mishawaka company long have been very large producers of felt boots and lumbermen's socks, to which later they added rubbers, first for use on "Combinations," and gradually adding other lines of rubber footwear.—It is understood that plans for the new boot and shoe factory building have been accepted and that work will be begun as soon as the weather permits. The building will stand alongside the chemical department, having a frontage of 80 feet and extending alongside the Erie railroad probably 200 feet.

## RUBBER GOODS MANUFACTURING CO.

THE directors at a meeting in New York on February 27 declared the twenty-fourth regular quarterly dividend of  $1\frac{3}{4}$  per cent. on the preferred shares of the capital of the company, payable on March 15, to shareholders of record on March 6. The amount disburseable was \$130,835.75.—The sixth annual meeting is due to be held on Thursday, April 13, at the registered offices of the company, in Jersey City.

## BUFFALO TO HAVE A RUBBER FACTORY.

THE Hewitt Rubber Co. (Buffalo, New York), the incorporation of which was reported in THE INDIA RUBBER WORLD of February 1, have secured premises and broken ground for a factory which, when completed and equipped, is intended to cost about \$300,000, and part of which is expected to be in operation by June 1. Mechanical rubber goods will be made, and particularly steam hose, air hose, and water hose, for fire engine, locomotive, and railway car use. The products in part will be based upon certain recently granted patents, involving some special machinery, which is now being manufactured. The plant will be electrically equipped and supplied with power from Niagara Falls. The president of the company, Mr. H. H. Hewitt, is also president of the Magnus Metal Co., extensive manufacturers of brass fittings for railway cars and engines. Mr. Ira B. Littlefield is the secretary.

## A NEW HOUSE IN LOS ANGELES.

THE Goodyear Tire and Rubber Co. (Akron, Ohio), appreciating the importance of southern California as a field for trade, have opened an extensive store at Los Angeles (No. 952 South Main street), with Mr. W. D. Newerf as Pacific coast agent. This will be an exclusive rubber goods house, and while handling everything in the rubber line it will make a specialty of tires and automobile supplies. The company's "Universal" rim, which was introduced to the public at the recent National automobile shows, has attracted much attention in the new territory since being put on exhibition at Los Angeles.

## SWINEHART COMPANY TO MANUFACTURE TIRES.

THE output under the Swinehart tire patents, which have been fully described heretofore by THE INDIA RUBBER WORLD, will hereafter be manufactured by the Swinehart Clincher Tire and Rubber Co. itself. This company secured possession by deed on March 6 of the plant of the Rubber Specialty Co. and the Federal Rubber Co. (Akron, Ohio), for \$40,000, and will manufacture the Swinehart tires there. The plant has been practically idle for some time. It is a three story brick build-

ing 65 X 200 feet and well equipped with machinery. Improvements in the machinery and interior of the building will be made, so that the plant will not be put in active operation for a month or more. The business of the company has increased rapidly since its formation a year ago, the Buckeye Rubber Co. having made the tires for the corporation in the meantime. The officers of the Swinehart company are J. A. Swinehart, president; B. C. Swinehart, secretary; and Howard Siegrist, treasurer; the additional directors being Henry Feuchter and F. E. Ream. The capital is \$100,000.

## A NEW RUBBER COMPANY ON THE PACIFIC COAST.

INCORPORATION papers were filed in San Francisco on February 14, under the laws of California, for the American Rubber Manufacturing Co., with \$50,000 capital. The incorporators are Archibald Borland, W. E. Griffiths, M. F. Oliver, H. Watson, and Mr. Knight. The new company has been formed to succeed the West Coast Rubber Co. (in bankruptcy). Since the date of our last report regarding the West Coast company, a sale of its effects has been made by the assignee, the proceeds being sufficient to discharge all the debts of the company and leave something for the shareholders. The new company is preparing to make considerable additions to the mechanical plant, and will attempt to secure a better location for the factory. It is felt by its promoters that room exists on the Pacific coast for a factory of the type which they purpose operating, in view of the fact that many occasions arise when it is desirable to obtain special articles in mechanical rubbers more promptly than can be ordered from the East. The troubles of the West Coast company are attributed to disagreements among its members, and not to the lack of opportunity for doing business. Mr. Oliver, named above, was superintendent of the West Coast factory, and, it is expected, will fill a similar position with the new company, the organization of which, by the way, has not been fully completed.

## FIRE IN RUBBER GOODS WAREHOUSES.

THE store of the Merchants' Rubber Co., jobbers of rubber footwear and clothing, No. 139 Duane street, New York, was damaged by a fire which broke out on the morning of March 3, in the premises of some other tenants of the building, on an upper floor. The other parties were burned out, while the damage to the rubber company was caused mainly by water. The building extends through to Thomas street, where it has a front adjoining the new warehouse of the United States Rubber Co., at No. 60, mentioned in these columns last month. Damage was also caused in this building by water. An official statement of the insurance carried on the stocks of the Merchants' Rubber Co. and the United States Rubber Co. places the amount at \$198,500. The Merchant's Rubber Co. have secured a new location, temporarily, at No. 144 Duane street, where a new stock of goods has been placed.

## THE CANADIAN RUBBER SHOE TRADE.

At a meeting of the Rubber Shoe Manufacturers' Association, at Toronto, on February 28, it was decided to fix the discount on first grade goods at 17 per cent. from the lists. The discount last year was 20 per cent. An extra discount of 5 per cent. will be allowed for specific orders placed before May 1 for Eastern points, and up to May 13 for Port Arthur and points West. A cash discount is also given of 2 per cent. for payment on the 10th of the month following shipment, and 1 per cent. for payment on the 30th of the month following shipment.



"All prices and discounts are subject to change without notice," and the discounts are not guaranteed. *The Canadian Shoe and Leather Journal* points out that the new lists vary very little from those of last season; 26 lines are listed lower this year and about the same number a little higher. The decreased prices relate mainly to boots and lumbermen's goods, as is also the case in the new lists in the United States. The same journal mentions the fact that last year each of the rubber shoe factories in the Dominion developed considerable new business, which it regards as evidence of the marked development of the trade in that branch. It also proves that slaughter prices do not, as a rule, induce trade. During the past few years, with staple shoe prices, there has been a much larger gain in trade than in former years when price conditions were less well regulated.

#### PUSHING THE SALE OF GORED SHOES.

An educational campaign in the interest of shoes made with elastic gores has been made recently in parts of New England by representatives of the Elastic Goring Weavers' Amalgamated Association of America. Two members of the Brockton union spoke at a recent meeting of the Lowell Trades and Labor Council, and similar addresses have been made elsewhere. Their intention is to have local dealers lay in stocks of the rubber-gored shoes, and by advocating their merits among working people work up a demand for them. Similar appeals to the members of labor organizations have been made at various times since the Elastic Goring Weavers first formed their union, in 1885.

#### THE MERCHANTS' ASSOCIATION OF NEW YORK.

THIS association, organized in 1897, having for its fundamental object "To foster the trade and welfare of New York," has now attained a membership of nearly 800, embracing representative houses in every important branch of New York commerce. The membership list embraces the following firms and corporations connected with the rubber and allied trades:

American Hard Rubber Co.	Hodgman Rubber Co.
George Borgfeldt & Co.	I. B. Kleinert Rubber Co.
The Celluloid Co.	New York Rubber Co.
A. W. Faber.	Rubber Goods Manufacturing Co.
Eberhard Faber.	United States Rubber Co.
The B. F. Goodrich Co. of New York.	Vulcanized Rubber Co.
Goodyear's India-rubber Glove Manufacturing Co.	Whitall Tatum Co.

The annual report of the association for 1904 refers to a wide number of topics in relation to which investigations have been made or movements put on foot to secure action by the municipal, state, or national authorities, with a view to benefiting not only the merchants but the general public. A review of this work indicates that the results accomplished have fully justified the existence of the body, and afford a sound basis for its call for a larger membership.

#### FORTY YEARS IN THE RUBBER INDUSTRY.

MR. WARREN A. GREENE, manager of the Lambertville Rubber Co. (Lambertville, New Jersey), recently completed the fortieth year of his connection with that company. The business was started in 1860, but was closed for a time during the civil war, on account of the parties chiefly interested having gone into the army. The factory was reopened in 1865, since which time it has experienced a steady growth, the number of employes having increased from about 20 to over 450. In response to a request from THE INDIA RUBBER WORLD for some statement regarding the growth of the company Mr. Greene said:

"In the effort to achieve success we have kept two things principally in view: First, to build up a reputation for goods of the very best quality and to maintain that standard, ignoring as far as possible the cheaper grades. Second, to establish a

degree of harmony between employers and employes that tends to permanency in their relations and to assure prosperity to both."

#### AMERICAN ASBESTOS.

THE New York *Commercial* says: "The American Asbestos Co., of Bedford City, Virginia, recently made a shipment of 100 tons of fiberized asbestos to Hamburg, and another order for 40 tons to the same place is now being filled. The mines are in Franklin County, Va., where the company has erected a \$40,000 plant."

#### INTERNATIONAL A. & V. TIRE CO.—FIRE.

REGARDING a newspaper report of a fire in the plant of this company, at Milltown, New Jersey, on March 21, the company advise THE INDIA RUBBER WORLD: "The building destroyed was a detached warehouse used for storage purposes only. No manufacturing was done in this building, and in our main plant, which consists of four large brick buildings with boiler plant and fire room attached, not even a pane of glass was broken. Our regular routine of manufacturing and shipping was not interrupted for a moment."

#### NEW PREMISES OF THE OHIO RUBBER CO.

THE Ohio Rubber Co. (Cleveland) are changing the location of their business for the reason that, as at present situated, the different departments are too much scattered, and they lack sufficient room. Their wholesale business and general offices will be removed about May 1 to Nos. 100-102 St. Clair street—a five story building with basement, 40×120 feet, and equipped with plant for furnishing light, heat, and power. The offices will be on the ground floor. Their new retail store, at No. 348 Erie street, to be opened about April 10, is intended to be one of the best retail establishments in their line in the whole country. They will carry everything in rubber, making a specialty of automobile apparel, and also give particular attention to golf and other sporting goods.

#### THE DAYTON RUBBER CO.—FACTORY FOR SALE.

THE assignees of The Dayton Rubber Co. (Dayton, Ohio) offer for sale the entire plant and equipment of the company, consisting of boilers, engine, rubber machinery, and office furniture, on Saturday, April 15. The plant is entirely new, the same having never been operated, and has been valued by the appraisers of the estate at \$27,086.58. Two patents for tires, owned by the company, are offered for sale separately. Further details will be found in the advertising pages of this Journal. —In connection with the embarrassment of this company, mention was made recently in these pages of suits brought against certain subscribers to the stock of the company to compel the payment of their subscriptions. Harrie N. Reynolds, who is a defendant in such a suit, has filed an answer in a Cincinnati court, stating that he knew the company's affairs were soon to be wound up, and asking that before any shareholders are required to pay, the assets be sold and the proceeds applied to the indebtedness.

#### INTERNATIONAL RUBBER MANUFACTURING CO.

WILLIAM T. BAIRD, trustee of the estate of the International Rubber Manufacturing Co. (Jersey City, New Jersey), in bankruptcy, has filed his final account, showing assets of \$22,170.60, which amount is applicable to the payment of expenses of administering said estate, and the payment of dividends, and a meeting of creditors has been called for April 3, at 2 P. M., at the office of Edwin A. S. Lewis, referee in bankruptcy, at Hoboken, to pass upon said account and declare a dividend upon the claims of the creditors. The company referred to was incorporated in New Jersey, September 29, 1902, with an authorized capital of \$100,000, and began the manu-

facture of mechanical rubber goods. W. T. Baird was appointed receiver for the company in the chancery court of New Jersey, December 7, 1903, following which a petition in bankruptcy was filed against the company in behalf of certain creditors, when the matter was transferred to the United States district court in the district of New Jersey.

#### RUBBER PAINT CO. (CHICAGO).

THE Rubber Paint Co. (Chicago) are rebuilding the factory and office building destroyed by fire on the night of December 2. The insurance has been adjusted, the loss sustained in the burning of the office and factory at Nos. 154-156 West Van Buren street amounting to more than \$100,000. The company lost a large amount of expensive special machinery, and since the fire much of the work had to be done by hand and primitive methods. New special machinery has been ordered, and some of it is now being delivered and put in place in a temporary factory at Fulton and Green streets. The company had another large factory just opposite the one destroyed. New offices were fitted up in this building and, through the use of this plant and the temporary factory and with the reserve stock stored in two warehouses, the company manage to fill their orders.—To save rubber importers and brokers the trouble of seeking to sell crude rubber to rubber paint manufacturers, it may be well to explain that the rubber used is undoubtedly of the synthetic variety with linseed oil as its base.

#### "TO REVOLUTIONIZE THE RUBBER INDUSTRY."

THE industries of Middletown, Ohio, are all busy turning out their products; the people are all busy working and glad that spring is so close at hand. The young and hard working business man, Mr. Harry W. Kress, is trying to have a plant located there that will manufacture a product that will revolutionize the rubber business. This plant is that of the Insulator and Rubber Manufacturing Co., lately organized to make a substitute from vegetable and mineral matters that will in every way supplant rubber, at one-twentieth the cost of rubber. The officers of the company are Phil Allen, Jr., president; George H. Phillips, vice president; Ralph J. Gohlsen, secretary; and James B. McNamara, treasurer. The Middletown Business Men's Club will take the matter up at the proper time, and the *Journal* of that city will not be surprised if a plant to manufacture this new product is in operation before we celebrate the glorious Fourth of July, 1905.

#### "PUNCHED RUBBERS" IN CANADA.

THE rubber shoe manufacturers of Canada have united in advertising in the newspapers, under the heading "For the Protection of the Public," some details in regard to "punched" rubber shoes. The advertisements say, in part: "A hole punched in a rubber indicates that it is a factory imperfect, or out of style, or in some way inferior and liable to prove unsatisfactory. - - - Purchasers of rubber footwear should see that goods represented to them as perfect and up to date are not punched." A correspondent in the trade writes to THE INDIA RUBBER WORLD: "The disposition of seconds and out of style rubbers has always been a serious problem in Canada. For years it was the custom to punch such lines with a small hole in the back of the shoe, and sell at an extra discount of 10 per cent., but this led to serious abuses. Manufacturers selling direct to the retail trade, in order to increase sales, could afford to punch perfect goods, give the extra 10 per cent., and then realize more than those selling only to the wholesale trade. To make this practice unprofitable, the extra discount was fixed at 20 per cent. Even this did not meet the case, so now it has been decided to punch all heavy goods with a hole  $\frac{1}{4}$  inch in diameter, on the side, and light goods with a hole

$\frac{1}{8}$  inch in diameter, in the front of the shoe." The advertisements referred to contain illustrations of shoes as punched, and it is hoped by this means to abate the nuisance and discredit seconds and out of style goods with the general public.

#### THE B. F. STURTEVANT CO. EMPLOYEES' CLUB.

A GROWING tendency among those connected with large corporations to organize for purpose of mutual improvement, is noticeable in all lines of trade. An interesting organization has just been perfected by those connected with The B. F. Sturtevant Co. (Boston), its object being to consider questions of engineering and commercial interest, and to increase the mutual acquaintance of the members. Its character is well suggested by its title, The Progress Club. Its membership is open to all who are in any way associated with the company. Its membership, however, is classified into Seniors and Juniors, the former including those who are 21 or over, who have had charge of the work of others, or who have been Juniors in regular standing for three years. Control is placed in the Council, consisting of president, vice president, secretary, treasurer, and three members at large, whose duty it is to arrange programs for the meetings, publish and distribute necessary reports of the proceedings, and generally direct the affairs of the Club. It will be a distinct purpose of the Club to associate in its membership those in the branch houses and local offices, as well as those connected with the plant at Hyde Park. A very successful future is anticipated for this new organization.

#### WESTERN ELECTRIC CO.

THE Western Electric Co., manufacturers of electrical apparatus on a large scale and hitherto among the most important buyers of hard rubber goods, have been engaged for some time past in equipping a hard rubber factory in Chicago for filling their own requirements in goods of this class. It is understood that the machinery is all in place, but that it may be some months yet before the factory is in operation.—The Western Electric Co. are now doing a large business in Europe having taken over in 1898 as a going concern the Fowler-Waring Cables Co. (London), the first manufacturers of lead covered cable in Great Britain. The company have well nigh recovered from the effects of the disastrous fire which destroyed most of their plant, and have now practically rebuilt all the departments, except that for the manufacture of pure and vulcanized rubber covered cables.

#### NEW YORK STOCK EXCHANGE TRANSACTIONS.

##### UNITED States Rubber Co.:

DATES.	COMMON.			PREFERRED.		
	Sales.	High.	Low.	Sales.	High.	Low.
Week ending Feb. 25	16,225	44 $\frac{1}{4}$	41 $\frac{1}{4}$	3,400	114 $\frac{1}{2}$	112 $\frac{1}{4}$
Week ending Mar. 4	9,350	42 $\frac{1}{2}$	40	6,200	113 $\frac{1}{2}$	110 $\frac{1}{2}$
Week ending Mar. 11	7,500	43 $\frac{1}{4}$	41 $\frac{1}{2}$	5,100	113 $\frac{3}{4}$	111 $\frac{1}{2}$
Week ending Mar. 18	8,700	42 $\frac{1}{2}$	40	2,600	112 $\frac{1}{2}$	110 $\frac{1}{2}$
Week ending Mar. 25	13,200	43	40 $\frac{1}{2}$	5,200	113 $\frac{1}{2}$	110 $\frac{1}{4}$

##### RUBBER Goods Manufacturing Co.:

DATES.	COMMON.			PREFERRED.		
	Sales.	High.	Low.	Sales.	High.	Low.
Week ending Feb. 25	4,700	27	26	1,300	98 $\frac{1}{2}$	97 $\frac{1}{2}$
Week ending Mar. 4	2,900	26 $\frac{1}{4}$	25 $\frac{1}{2}$	1,500	97 $\frac{1}{2}$	97
Week ending Mar. 11	1,700	25 $\frac{1}{2}$	24 $\frac{1}{4}$	...	...	...
Week ending Mar. 18	17,300	27 $\frac{1}{2}$	25 $\frac{1}{2}$	500	96 $\frac{1}{2}$	97
Week ending Mar. 25	62,400	31	25 $\frac{1}{2}$	3,100	97 $\frac{1}{2}$	95 $\frac{1}{2}$

The above quotations for preferred shares of both companies are the highest ever recorded.



## NEW INCORPORATIONS.

THE Stein Double Cushion Tire Co. (Akron), March 1, 1905, under Ohio laws, to manufacture rubber goods; authorized capital, \$100,000. Incorporators: Jacob Newman, Joseph Frankel, Jacob Landesman, Jacob Selmanovitch, L. G. Kraus. This company was first incorporated under New Jersey laws, in September, 1901, succeeding another company by the same name, formed at Meadville, Pennsylvania, to market a tire patented by Charles Stein, the tires being made at that time under contract. Work was begun on a factory at Akron early in 1902, and since the summer of that year the company have made their own tires.

=Suffolk Rubber Co., February 1, 1905, under New York laws, to manufacture rubber shoes; capital, \$500. Incorporators: F. S. Cutler, A. V. Trust and C. B. Bretzfelder. The New York City Directory records Alexander V. Trust as an "investigator" and Charles B. Bretzfelder as a lawyer and notary, both at No. 120 Broadway. The Brooklyn Times reports: "The indications are that the rubber industry is to be revived at Setauket. A stock company known as the Suffolk Rubber Co. has recently been organized with Franz S. Cutler, of Millbrook, N. Y., as secretary and treasurer. A building, size 80×80, is first to be built, and a large addition is soon to follow. A large force of carpenters have been engaged to rush the buildings to completion."

=Catasqua Rubber Co. of Pennsylvania, February 16, 1905, under Pennsylvania laws, to establish a rubber factory at East Catasqua; capital, \$100,000. Incorporators: Hugh E. Crilly, Raymond W. Lentz, and P. F. Cannon, Allentown, Pa.; James Regenry, Easton; J. W. Kenevel, and W. W. Wilson, Philadelphia. This company was mentioned in THE INDIA RUBBER WORLD, November 1, 1904 (page 62), as having filed incorporation papers in the District of Columbia.

=Reinforced Hard Rubber Co., March 13, 1905, under Delaware laws, to manufacture hard rubber goods; capital, \$250,000. Incorporators: Charles D. Bird, J. G. Gray, and M. B. F. Hawkins, all of Wilmington, Delaware. This company appears to have been formed to exploit patents granted to Dr. W. R. Sine, of Williamsport, Pennsylvania, and other patents for which application has been made, relating to new vulcanizing processes. It is understood that the company is doing some work at the Jersey City factory some time operated by the North American Rubber Co., now in liquidation.

=The Clark Insulation Co. (Boston), March 11, 1905, under Massachusetts laws, to deal in insulation materials; authorized capital, \$100,000. Incorporators: Henry A. Clark (No. 186 Commonwealth avenue), Paul R. Curtis and George E. Curtis, Boston; Harry B. Burley, Brookline. Mr. Clark is president and Mr. Burley treasurer. Mr. Clark was the founder of the Eastern Electric Cable Co., the embarrassment of which, in 1903, was reported in these pages at that time.

=The Phoenix Rubber Co., March 20, 1905, under Ohio laws; capital, \$15,000. Incorporators: Jonathan Taylor, Akron; John W. McCoy, W. C. Hollinger, C. Wiegand, and Milton Prentice, Barberton. The company have purchased the plant and rights of the Lilly Rubber Co., of Barberton, of which Charles Ammerman was president and W. C. Lilly manager. The new company will enlarge the Lilly plant, and manufacture about the same line of goods.

=Consumers' Rubber Co. (Bristol, Rhode Island), March 22, 1905, under Rhode Island laws, to manufacture and sell rubber goods and acquire and dispose of patent rights, and other business incidental thereto; capital, \$100,000. Incorporators: Terence McCarty, Nathan W. McCarty, and James P. Murphy, all of Bristol.

=Eureka Flexible Conduit Co., March 17, 1905, under New Jersey laws, to manufacture and deal in, rubber conduits and tubes; capital, \$100,000. Incorporators: Watson H. Linburg, Welling G. Sickel, and John S. Broughton. Registered office, Prospect street, Trenton, N. J.; agent in charge, John S. Broughton.

=Acme Rubber Stamp Co. (Trenton), March 14, 1905, under New Jersey laws, to manufacture rubber stamps; capital \$25,000. Incorporators: Charles E. Wardell, Norman F. Bicking, and Bernard Menke, all of Trenton.

=Henry A. Gould Co. (New York), March 4, 1905, under New York laws, to deal in rubber merchandise; capital, \$125,000. Incorporators: Henry A. Gould, F. Matherson, and J. H. Baker, all of New York city.

=Banigan Rubber Co. (Buffalo, N. Y.), March 24, 1905, under New York laws, to deal in rubber goods; capital \$25,000. Incorporators: Edward R. Rice, Buffalo; Walter S. Ballou, Providence, R. I.; and C. W. Barnes, New York city.

=Acme Rubber Works (Brooklyn), March 18, 1905, under New York laws; capital, \$25,000. Directors: Anton A. Jung, George Fuchs, and Matthew McEwing, all of Brooklyn.

=The Garlock Packing Co. (Palmyra, N. Y.), March 27, 1905, under New York Laws, to make packings for steam, air, etc.; capital \$1,000,000. Directors: O. J. Garlock, Frederick W. Griffith, and James H. L. Gallagher, all of Palmyra. This is to continue a long established business.

## TRADE NEWS NOTES.

THE second annual banquet of the Mechanical Rubber Manufacturers' Association of the United States is announced to be held at the Waldorf Astoria, New York, on Thursday evening, April 6, at 6.30 P. M. The banquet will be limited to manufacturers of mechanical rubber goods and their associates, and a very pleasant time is anticipated. The secretary, Mr. William Hillman, has sent out notices to the members, asking how many tickets will be required.

=The Hood Rubber Co. have obtained permission from the selectmen of Watertown, Massachusetts, to erect three additional buildings in connection with their factory—a brick three story building 80×96 feet; a building 32×112 feet, to be part one story and part four stories; and a building 24×24 feet. The company are understood to have filed with the inspector of buildings plans for two structures beside the above—one to be used for wood working, and the other as a foundry.

=The permanent offices of the Gutta Percha and Rubber Manufacturing Co. of Toronto, Limited, have been removed to the buildings at Yonge and Wellington streets, Toronto, their acquisition of which was reported in THE INDIA RUBBER WORLD of December 1 last.

=Poel & Arnold announce: "We are moving our Boston office from No. 150 Franklin street, where we have been for so many years, to Rooms 807 and 808, on the eighth floor of the new Postoffice Square building, No. 79 Milk street, where we will be at the disposal of our friends as heretofore."

=The St. Louis office of the Home Rubber Co. (Trenton, New Jersey) has been removed to No. 321 North Main street.

=The Woonsocket Rubber Co. recently posted notices that their two factories would close on March 30 for two weeks, for the annual stock taking and repairs.

=The Lowell Rubber Co., jobbers of rubber goods generally, at Lowell, Massachusetts, have removed their sales room and office to the Swan building, No. 24 Central street, where they have a better location and much larger floor space. Mr. Isaac Crocker, president and treasurer of the company, reports a very satisfactory condition of business, which has already shown improvement since the removal of the store.

=Notices were posted recently at the two factories of the Boston Rubber Shoe Co., that they would be closed on Wednesday, March 29, for two weeks, for the annual stock taking and repairs.

=The factory of the National India Rubber Co. was to be closed for two weeks, beginning March 31, for stock taking and repairs. There were 1718 names on the payroll at last accounts, and in view of the amount of business in sight, it is expected that the factory will be operated continuously during the summer.

=The Linthicum Rubber Co., jobbers of rubber footwear at Baltimore, Maryland, have become established in a new fire-proof warehouse and offices at No. 26 South Hanover street, immediately opposite where they were burned out in February last year. They advise THE INDIA RUBBER WORLD: "While there are finishing touches to be put on our new store, we think that when it is completed we will have the most up to date building that has been erected here since the fire." They have removed to the new store the stock of their temporary warehouse in Baltimore, and also that at York, Pennsylvania, which they were obliged to open after the great fire on account of the lack of suitable accommodations in Baltimore. The York warehouse has been permanently closed.

=The Commercial Club of Olathe, Kansas, was addressed on the evening of March 9 by C. S. Heller, of Akron, Ohio, who proposed, if properly encouraged, to erect there a \$150,000 rubber reclaiming plant, in which would be employed certain secret processes. A further meeting was arranged for.

=The factory of the Beacon Falls Rubber Shoe Co. has continued busy all winter, and at the middle of March was making a daily "ticket" of 10,000 pairs.

=The Fall River Rubber Co. (Fall River, Massachusetts), have been awarded a contract for 200 pairs of rubber boots for the naval training station, and a ton of rubber matting for the naval hospital, at Newport.

=The Joseph Stokes Rubber Co. (Trenton, New Jersey) have removed the location of their western branch, in Chicago, to No. 40 Dearborn street.

=The Imperial Rubber Co. (Beach City, Ohio), the organization of which was reported in these pages a short time ago, inform THE INDIA RUBBER WORLD that they have not yet got out a catalogue, but that they are making a full line of seamless water bottles, fountain syringes, household and surgeon's gloves, ice bags, and the like, besides hard rubber harness mountings, and also vehicle tires.

=The demand in Canada for the "Everstick" rubber footwear, the control of the Canadian patents for which has been secured by the Canadian Rubber Co. of Montreal, as reported in THE INDIA RUBBER WORLD of December last, has been phenomenal. In proportion to the population, the sale promises to be greater than in the United States, which may be due in part to the aggressive advertising methods of Canadian company, as this feature of their business is looked after very thoroughly.

=The directors of the United States Cotton Duck Corporation declared a dividend of 3 per cent. on the preferred capital stock, out of the net earnings for the year ending December 31, 1904, payable on March 25.

=The trustee of the North American Rubber Co. (in bankruptcy) has petitioned for leave to offer at private sale certain assets of the company, and a hearing thereon has been set for April 4, at 2 P. M., at the office of the referee in bankruptcy, William H. Willis, No. 115 Broadway, New York. At the same hour there will be a hearing on a petition of the trustee for leave to bring suit against the Birmingham Iron Foundry,

whose connection with the bankrupt company appears to be confined to their having supplied it with machinery.

=James C. Manchester, who for 30 years was employed by the National India Rubber Co. (Bristol, Rhode Island), and foreman of the shoe department for 8 years past, retiring recently to enter another business, was presented on his fifty-seventh birthday with a beautiful hall clock, by the employees of the shoe department.

=The factory of the Merchants Rubber Co., Limited (Berlin, Ontario), was visited on February 15 by a party of Toronto business men, mainly in the retail shoe trade, on the invitation of Mr. George E. Boulter, manager of the company's Toronto branch, who chartered a special railway car for their use. The object was to show the factory in operation, and the visitors found all hands at work, and witnessed all the processes of converting crude rubber into finished rubber boots and shoes. The company's guests were entertained at dinner at one of the Berlin hotels before their return, upon which occasion Mr. James Acton, of *The Canadian Shoe and Leather Journal*, acted as chairman.

=The rubber manufacturers' committee on rubber stealing has had placed before it a case reported by a western rubber manufacturer, who had had offered to him a lot of medium and coarse Pará rubber, by a person claiming to have secured it from the estate of his father in New Orleans, a year or more ago. On investigation the rubber proved to be quite new and green, and the manufacturer, under the impression that the rubber had been stolen, probably from an Akron rubber factory, declined to purchase.

=The qualified electors of the town of Bowmanville, Ontario, on March 13, voted by a large majority in favor of a by law Limited, the same to be repaid in 20 yearly instalments of \$750, authorizing the loan of \$15,000 to The Durham Rubber Co., without interest, the consideration being that the company shall buy a specified amount of land in a designated location, and erect certain buildings and install therein the machinery now used in their Bowmanville factory and additional machinery of a certain minimum value, and provide for the employment of a certain number of persons, with a yearly payroll of \$25,000 or more, said conditions to hold for 20 years. The town corporation is to be protected by a mortgage on the rubber plant, which shall also be kept adequately insured. The rubber company is to be exempt for 20 years from all taxation except for school purposes.

=The cargo of the steamer *Pequot*, of the Providence line, which arrived in Providence from New York on March 17, is reported to have been the most valuable that ever reached that port on a Sound steamer. It included over \$200,000 worth of crude rubber, destined for the factories of the Woonsocket Rubber Co., Joseph Banigan Rubber Co., National India Rubber Co., and the American Wringer Co. A local newspaper mentions that the Woonsocket Rubber Co. nearly always keep in stock at their mills \$200,000 worth of raw rubber.

=The National India Rubber Co. have been granted the right, by the town council of Bristol, Rhode Island, to build a freight trolley line connecting their factory with the freight station of the Consolidated railroad, which is desired as a means of facilitating shipments to and from the factory.

=The National India Rubber Co. (Bristol, Rhode Island) were reported recently to be making 30,000 pairs daily of rubber shoes, arctics, and tennis goods, this being the largest "ticket" in the history of the factory. A number of changes are planned in the equipment and location of some of the departments, and machinery is being removed from and repairs made in some of the rooms involved.



=Burton R. Parker, who formerly occupied a similar position with the Hartford Rubber Works Co., has been appointed advertising manager for The Fisk Rubber Co.

=Since the death of the senior member of the firm of Walker & Gibson (Albany, New York), a house widely known to the druggists' sundries trade, Mr. Frank Applin, one of the younger men in the house, has been rapidly advanced, both in the management and the buying, and has been doing some excellent work.

=The United States Rubber Co., it is reported, have retired recently \$2,000,000 of their 5 per cent. funding notes, making a total of \$4,000,000 retired of the total issue of \$12,000,000 made in the spring of 1902. It is understood that the remainder of the loan has been refunded on terms very favorable to the company. There has been not a little speculation among holders of preferred stock as to the possibility of the declaration of a dividend at a regular meeting of the board in April sufficient to make a total of 8 per cent. for the fiscal year.

=The Harburg and Vienna India-Rubber Co., New York agency, No. 350 Broadway, New York, is the first agency established in America by the Vereinigte Gummiwaaren-Fabriken, Harburg-Wien, although some of their products have been imported direct by several important houses in the past. This agency is in charge of Messrs. C. H. Taylor and Edward A. Schneider, two young men who have been employed for several years in a large export house in New York. No stock will be carried for the present, but plans for carrying stock are under consideration. The new agency represents also the Galalith products of a subsidiary company of the Harburg-Vienna concern.

=The factories of the United States Rubber Co. at Naugatuck, Connecticut, closed on March 30, and the first "ticket" of boots and shoes will be made on April 5. The shutdown will be only four days, which are required for certain repairs to plant.

=An involuntary petition in bankruptcy was filed in the United States district court at Chicago, on March 3, against the Illinois Rubber Co., a rubber goods jobbing house, at Nos. 258-260 Franklin street, Chicago. The Equitable Trust Co. was appointed receiver. The liabilities have been reported at \$50,000 and the assets at \$25,000 to \$30,000. The creditors are largely Eastern firms. The company was incorporated in 1893, under Illinois laws, with \$25,000 capital.

=The Williams Electric Machine Co. (Akron, Ohio), of which H. B. Camp is president and H. A. Williams general manager, and which has done some work in supplying rubber factories, report a large number of sales during the past month of their electric clutches, among their customers being a state university, a brass rolling mill, an engraving company, and a large clay manufacturing company, which shows the diversified applicability of these clutches.

=What is reported to be a strong amateur baseball team has been organized in the office of The B. F. Goodrich Co. (Akron, Ohio), with George Harty manager, and is prepared to arrange games with other teams of its class in or near Akron.

=C. B. Raymond has resigned his position as manager of the Akron factory of the American Hard Rubber Co., and will become assistant secretary of The B. F. Goodrich Co., R. P. Marvin still retaining the position of secretary, which he has filled for so many years.

=Mr. Thomas McIlroy, Jr., manager of The Gandy Belting Co., (Baltimore, Maryland), a position which he has held for five years past, after having been long engaged in the rubber trade in Canada and the United States, sailed on the *Caronia* from New York on March 11, for a prolonged visit to Europe.

Mr. McIlroy recently made a business trip to Mexico, and his versatility is further indicated by the appearance in the Toronto (Ontario) *Sunday World*, from his pen, of an interesting description of a bullfight which he witnessed, together with an interview with a famous *matador*.

=Two arrests were made by the police of Bristol, Rhode Island, on March 6, following an investigation set on foot in view of the suspected theft of shoes from the factory of the National India Rubber Co. One of the prisoners, Albert H. Penno, employed in the packing department, is charged with the theft of 600 pairs of rubber and tennis shoes, valued at \$330, and Hyman Yalisavetzsky, the keeper of a small notion store, is charged with receiving stolen property. Penno confessed the theft, saying that he was constantly in debt to the notion dealer, while the latter admitted buying some of the goods, which were found in his possession, but denied knowing them to have been stolen.

=The *Canadian Manufacturer* says: "The American Chiclé Co., Toronto, will erect a factory at a cost of \$30,000 to manufacture chewing gum." The company have had a Toronto factory from the date of their incorporation and the report referred to doubtless relates to an extension.

=The suit of Charles A. Place, of New York, to recover \$27,000 from the Metropolitan Rubber Co., alleged to be due him as salary as president of that company and unpaid, was tried by a jury before Judge Holt in the United States circuit court at New York early in March, and resulted in a verdict for Mr. Place of \$14,250 and interest. Details in regard to Mr. Place's claim and the winding up of the Metropolitan Rubber Co. were given in THE INDIA RUBBER WORLD of January and February 1903.

A CORRECTION.—An error was made in the last issue of this Journal [page 209] in referring to Mr. Robert E. Hotchkiss as having gone from Liverpool to the Russian-American India-Rubber Co. (St. Petersburg). Mr. Hotchkiss has become superintendent of the boot and shoe department of the North British Rubber Co., Limited.

#### GOSHEN RUBBER WORKS (GOSHEN, INDIANA).

AN involuntary petition in bankruptcy was filed against this company on March 17 in the United States district court at Indianapolis, Indiana, by attorneys representing N. Z. Graves & Co. (Chicago branch), dealers in supplies, on a claim for \$2728.31. Albert G. Harlin, of South Bend, Indiana, was appointed receiver, under bond of \$20,000. The assets are stated to be \$109,000 and liabilities \$58,000. A representative of a creditor of the company advises THE INDIA RUBBER WORLD: "Our understanding is that negotiations are pending for a settlement of this matter and it is improbable that any further proceedings will be taken. The Goshen Rubber Works claim to have practically completed arrangements for a bond issue of \$80,000, from the proceeds of which they expect to pay all of their indebtedness and secure a working capital to enable them to carry on their business."

#### THE CANADIAN RUBBER CO. OF MONTREAL.

AT the annual meeting of this company, at Montreal, on March 9, Sir Montagu Allan, the president, in submitting the annual report to the shareholders, stated that the company had been able to pay a dividend of 5 per cent. for the preceding year, this being the first dividend for some four years past. The entire organization of the company has been changed meanwhile, and very few of the old officers or employés are now with the company. The business of the company has doubled during the past two years, and provision is being made for a further increase, both by enlarging the facilities and by

an aggressive business policy. During the two years referred to more than \$350,000 has been spent for new machinery and equipment, and it is proposed to expend \$200,000 to \$250,000 this year in further extending the plant. The report referred in complimentary terms to the work done by Mr. D. Lorne McGibbon, the general manager, under whose direction the company had shown such good progress. The board and the officers were re-elected: Sir H. Montagu Allan, president; J. B. Learmont, vice president; Charles F. Smith, Lieutenant Colonel F. C. Henshaw, H. Markland Molson, Lieutenant Colonel Hector Prevost, Hugh A. Allan, Andrew A. Allan, and Alfred Piddington. E. Alex. Wright was re-elected secretary-treasurer, and Mr. McGibbon general manager.

#### PERSONAL MENTION.

THE Editor of THE INDIA RUBBER WORLD is in receipt of a beautiful album of photographs showing rubber tapping, coagulating, grading, and handling along the Amazon. The donor is Dr. Alberto Pirelli, of the important firm of Pirelli & Co. (Milan, Italy), who has just returned from a trip up the Amazon.

=Mr. Richard H. Pease, manager of the Pacific coast business of the Goodyear Rubber Co. (New York), together with Mr. R. H. Pease, Jr., has lately been on a visit to the East.

=Mr. Lester Leland, second vice president of the United States Rubber Co. is back from his Mediterranean trip, in which he took in the Nile, going as far as the first cataract.

=Mr. D. N. Graves, of the Mutual Rubber Production Co. No. 1 (Boston), has just returned from a visit to their Mexican plantation, and reports excellent progress.

=Mr. F. H. Appleton, of F. H. Appleton & Sons, rubber reclaimers (Boston), has just returned from a trip to Bermuda.

=Mr. E. A. Saunders, of the Mishawaka Woolen Manufacturing Co. (Mishawaka, Indiana), is spending a short time on the Pacific coast, to return early in April.

=Quite a party of men interested in the rubber business sailed for Europe on the *Lucania* on March 25. Among them were Messrs. Arthur W. Stedman, of George A. Alden Co., Boston; William Symington, of Alden, Symington & Co., London; the Hon. L. D. Apsley, of the Apsley Rubber Co., Hudson, Mass., and F. C. Hood, of the Hood Rubber Co., Boston.

=Mr. Le Baron C. Colt, manager of the National India Rubber Co., celebrated his birthday anniversary at his home (Bristol, Rhode Island) on February 27, with a dinner at which the guests were Judge Le Baron B. Colt, of the United States court, and his family; Colonel Samuel Pomeroy Colt, his uncle; Mrs. Converse, wife of Rear Admiral George A. Converse, U. S. N., mother of Mrs. Le B. C. Colt; and Erskine M. Phelps, of Chicago.

=Mr. Lewis C. Warner, superintendent of the Beacon Falls Rubber Shoe Co., sailed from New York on March 17, for Nassau, where he expects to remain for several weeks.

=Mr. Isaac Crocker, president of the Hope Rubber Co. (Providence, Rhode Island) and the allied rubber goods jobbing houses in Massachusetts, has returned from a five week's trip to Jamaica, on which he was accompanied by Mrs. Crocker.

=The members of the Rubber Shoe Manufacturers' Association of Canada, at the conclusion of their meeting in Toronto a month ago to revise lists for this year, were entertained at dinner by Mr. Charles N. Candee, secretary of the Gutta Percha and Rubber Manufacturing Co. of Toronto, Limited.

=Mr. H. A. Howe, of the Quaker City Rubber Co. (Philadelphia), was the guest on the evening of February 14 of the Newburyport (Mass.) Association, Stationary Engineers, before whom he lectured on "Friction of Machinery." After the lecture a supper was served.

#### THE MANUFACTURE OF CUT SHEET.

CUT sheet, or "patent gum," which is very largely used throughout Europe, is comparatively unknown in the United States, only two concerns making it, and that in a very small way. In its manufacture only the best dry Pará rubber is used, the first process being that of mastication. It comes out of the masticator in a "pig" or roll, and three of these are put on end in a hydraulic press 22 inches in diameter. Running through the middle of the press, between the pigs, is a round iron mandrel which fits on the ram of the press. This is for the purpose of centering the roll.

After 40 hours' pressure cold, a block of rubber 40 inches by 22 inches is formed. This is forced out by hydraulic pressure, the mandrel also being forced out by a small hydraulic ram. A square mandrel is then forced through the middle of the cylinder, and the mass is placed in a vulcanizer and boiled in water 24 hours to shrink it. In order to keep the cylinder in form it is, before going into the vulcanizer, placed in a cylindrical shell made of wrought iron and in two parts. It is very strong, and is fastened together with bolts.

During the early stages of the shrinking process the rubber expanding under heat sometimes breaks the shell all to pieces. After the shrinking, the square mandrel is forced out again and the block is put in a refrigerator, where it is kept from six weeks to two months at a temperature which gradually freezes it throughout. Where much of this work is done the refrigerator is a large one, the blocks are all carefully numbered, and one manufacturer keeps as much as 20,000 pounds always in stock. The refrigerator is opened once a day to take out stock and to replenish it. When the block is thoroughly frozen it comes out as hard as granite, has another square mandrel forced into it, and is put in a cutting lathe. This lathe is an exceedingly complicated mechanism, with almost as many parts as a watch, and capable of the finest adjustment. It is fitted with two cones, giving it an ideal variable speed device, the cutting knife being a long, straight blade that vibrates at the rate of 2000 vibrations a minute.

A chemical solution is used to keep the knife cool and help it to cut. The cutting machine is arranged to cut some 20 different thickness or counts, running from one to twenty, although from five to fourteen are the marketable sizes. The sheet is sold in rolls, 55 pounds each, and finds a very large market for the manufacture of acid cured goods, such as toy balloons and the like.

A SPECIAL committee has been appointed by the city governments of Malden and Melrose, Massachusetts, to consider the question of accepting the park which has been offered to the two cities by the family of the late Hon. Elisha S. Converse. The special purpose of the committee is to negotiate for a modification of the terms governing the gift.

#### Rubber Scrap Prices.

NEW YORK quotations—prices paid by consumers for carload lots, in cents per pound—show a slight decline since our last report, as follows:

Old Rubber Boots and Shoes—Domestic.....	5¾ @ 5⅞
Do —Foreign.....	5¼ @ 5½
Pneumatic Bicycle Tires.....	4¼ @ 4½
Solid Rubber Wagon and Carriage Tires.....	6
White Trimmed Rubber.....	8½ @ 8¾
Heavy Black Rubber.....	4
Air Brake Hose.....	2½ @ 2⅝
Fire and Large Hose.....	2 @ 2¼
Garden Hose.....	1¾ @ 1⅞
Matting.....	¾ @ 1



## NEW TRADE PUBLICATIONS.

THE FAULTLESS RUBBER CO. (Akron, Ohio) have issued Catalogue No. 7 of their High Grade Rubber Sundries and Specialties, which is even more attractive than any former publication of this house. A number of additions have been made to the company's line of products, which now include a number of articles of toys and sporting goods, in addition to what has become a very full line of druggists' sundries. Their sponges and sponge goods are prominently displayed. The illustrations are particularly good. [6"×9"—48 pages.]

THE WHITMAN & BARNES MANUFACTURING CO., (Chicago), issue their Catalogue No. 57, embracing all the varied products, of which Mechanical Rubber Goods form only one department. The company have long been makers of agricultural implements, hardware, and tools, to which they added rubber goods a few years ago, in order to render them independent of other factories in supplying the wants of their own customers. The result has been the development of a general trade in this branch. The rubber section of the new catalogue embraces belting, packing, hose, mats, matting, valves, gaskets, horseshoe pads, bicycle tires, grain drill tubes, fruit jar rings, mold work, etc., indicating a widely varied output. [6½"×9", 110 pages.]

THE B. F. GOODRICH CO. (Akron, Ohio), issue an artistically got up booklet, "The Goodrich Road," which is a compilation of records made with the Goodrich clincher automobile tires. [5"×7". 16 pages.] —Another handsome booklet, "Goodrich Tires on the Pacific Coast," relates particularly to results attained in the use of Goodrich tires in the region referred to. [3½"×6½". 20 pages.]

THE CANADIAN RUBBER CO. OF MONTREAL issue a very complete, well arranged, and attractive looking catalogue of Fire Hose and Fire Department Supplies. The manufacture of fire hose is discussed at some length, including the details of wax and Pará gum treated rubber lined cotton fire hose. A number of pages are devoted to an extensive list of fire department equipment, including not a few items into which rubber enters. [5½"×8". 102 pages.]

THE ST. HELENS CABLE CO., LIMITED (Warrington, England), who have during the past few years entered extensively in the manufacture of mechanical rubber goods, send us an illustrated price list of Rubber Mats, Matting, Floor Tiling, etc. [7½"×9½". 12 pages], and another devoted to Rubber Tires for Cabs, Carriages, and Motors [7½"×9½". 12 pages], both of which embrace a large variety of products. The tires listed are of the solid type, while the mats are unusually attractive in pattern. It is of interest to note that an extensive use is made in these goods of "Dialite," a patented compound into which a specially purified bitumen enters to an important extent. The company produce also solid sheet rubber, washers, valves, buffers, roller coverings, packings, and the like, in addition to insulated wires and cables, in which latter class of work they have been engaged since 1899.

THE MERCHANTS RUBBER CO., LIMITED (Berlin, Ontario), issue their second annual catalogue and price list of Rubber Boots and Shoes, under date of March 1, 1905, embracing a large variety of styles, including their "Moose Brand" snag-proof lumbermen's goods, and yachting and tennis shoes. [7"×6". 32 pages.]

WHITALL TATUM CO. (New York), in connection with their extensive business as manufacturers of druggists', chemists', and perfumers' glassware, have developed a large trade in rubber Druggists' Sundries. Their 1905 annual price list includes illustrations and prices of such rubber goods for every use for which

a demand would be likely to be made upon a druggist, including an extensive line of hard rubber combs. These rubber goods are understood to be manufactured for the company by some of the leading rubber houses of the country. [6¾"×9". 206 pages.]

THE MONTREAL WATERPROOF CLOTHING CO. (Montreal, Quebec) have issued for 1905 a catalogue of their waterproof and rainproof garments, illustrated by more than 30 full page plates, showing a number of attractive styles for men and women. Prominence is given to their rainproof garments, the cloth in which has been treated by the "Millerain" patent porous rainproof finish. [6"×8¾". 70 pages.]

THE DERMATINE CO., LIMITED, (London), have issued a Spanish edition of their very interesting catalogue of Dermatine products, the name of the material in Spanish taking the form "Dermatina." [6"×9¼". 32 pages.]

## ALSO RECEIVED.

THE Joseph Stokes Rubber Co., Trenton, New Jersey.—Cotton Garden Hose. 4 pages.

The Swinehart Clincher Tire and Rubber Co., Akron, Ohio.—Swinehart Tires, 1905. 8 pages.

New York Sporting Goods Co., No. 61 Nassau street, New York.—Sporting Goods Catalogue, 1905. Edition No. 30. 100 pages.

The Goodyear Tire and Rubber Co., Akron, Ohio.—(a) The Pneumatic Golf Ball. [Details of Construction.] 16 pages. (b) The Pneumatic Golf Ball. [Testimonials from Users.] 8 pages.

Boston Belting Co., Boston.—Fire Hose for Factory and Mill Protection. 4 pages.

## SOME WANTS OF THE RUBBER TRADE.

[314] WHO manufactures machinery for buffing and polishing the surface of sheet rubber and packing? The inquiry comes from an important rubber factory in the mechanical branch.

[315] A correspondent in central Africa, interested in the crude rubber trade, asks THE INDIA RUBBER WORLD for the addresses of buyers of ivory (elephant tusks from 12 pounds upward), carved hippopotamus teeth, animal heads, etc.

[316] An inquiry comes from Pennsylvania: "Please inform me where I can get short elastic nipples for bottles."

[317] A correspondent in Georgia writes: "Can you put us in touch with parties who manufacture linseed or rubber compound suitable for coating cotton goods to be used for waterproof covers of different kinds, such as tarpaulins, wagon tops, horse covers, etc.?"

[318] An inquiry comes from a new house interested in bathroom appliances, for the manufacturers of rubber bulbs such as are used for attaching shower bath tubing to metal faucets.

[319] A correspondent in Paris, France, wishes the addresses of manufacturers of celluloid, in sheets, tubes, sticks, and the like.

[320] "Will you kindly inform me of some firm which manufactures coagulating machinery?"

## ANSWERS.

[309] THE United States Talc Co. (Gouverneur, New York), write that their product is known as talc or agalite, and sometimes Asbestine. We understand that it is used largely as a filler in paper making.

[310] Leo. Weiss, No. 125 Grand street, New York, writes that he has become sole agent for the little rubber novelty for pipe smokers, the "Squeezit."

[311] We are advised that the firm manufacturing Vulcanine are Messrs. Thomas Rowley & Co., Limited Manchester, England.

## REVIEW OF THE CRUDE RUBBER MARKET.

VALUES for Pará rubber during March advanced up to the 13th instant, when the cost at Manáos was said to be on a basis which would make the import cost in New York \$1.39½ for fine new Upriver. A reaction set in three or four days later, owing to the fact that the receipts at Pará during the first 17 days of the month had reached 3250 tons, whereas the arrivals for the whole of that month last year were only 3940 tons. Liverpool and New York prices were quoted lower, though a condition of firmness prevailed, and while the quotations to-day are somewhat lower than the highest figures for the month, they show an important advance over the market one month ago.

During the greater part of the month there were no large manufacturers in the market for Pará rubber. Large quantities were distributed on previous sales, however, from the exceptionally large cargoes of Pará rubber received during February and March. Over 8,000,000 pounds arrived at New York direct from the Amazon during March, the cargo of the *Hubert* at the beginning of the month, of 2,364,700 pounds, probably being the most valuable cargo of rubber that ever reached any port. An analysis of its contents, in connection with the cash prices then prevailing, would indicate a value of more than \$2,500,000. The United States Rubber Co. are reported to have a three months' supply of unwashed Pará rubber in stock, and their abstention from the market is referred to as one of the causes of declining prices.

Total receipts for the season at Pará (including Caucho) at the end of March 28 had been 26,930 tons, as compared with 25,450 to March 31 last year, 23,540 tons in 1903, and 24,530 tons in 1902. These figures would indicate a certain increase in the total for the season, over any previous record, but the fact that prices are so well maintained points to active consumption. Not only the United States but Great Britain, Germany, and France showed distinctly larger net imports of crude rubber in 1904 than in any former year, and while reports of European manufacturing companies now coming out indicate reduced dividends, on account of the high cost of raw material, they almost without exception refer to an increased volume of business.

In view of the large amount of rubber offered at the Antwerp sale on March 29 a feeling prevailed in advance that lower prices would result, but it appears that the prices paid were even larger than the exceptionally high figures of February.

Following is a statement of prices of Pará grades, one year ago, one month ago, and on March 31—the current date.

PARÁ.	April 1, '04.	Mar. 1, '05.	Mar. 31.
Islands, fine, new.....	107@108	121@122	127@128
Islands, fine, old.....	@	none here	none here
Upriver, fine, new.....	109@110	124@125	129@130
Upriver, fine, old.....	110@111	none here	none here
Islands, coarse, new.....	67@ 68	70@ 71	74@ 75
Islands, coarse, old.....	none here	none here	none here
Upriver, coarse, new.....	86@ 87	92@ 93	96@ 97
Upriver, coarse, old.....	none here	none here	none here
Caucho (Peruvian) sheet.....	69@ 70	71@ 72	75@ 76
Caucho (Peruvian) ball.....	77@ 78	80@ 81	82½@ 83

Most of the other grades in the New York market have also shown an advance during the month :

AFRICAN.		
Sierra Leone, 1st quality	102@103	Accra flake..... 32@ 33
Massai, red.....	102@103	Lopori ball, prime.... 106@107
Benguella.....	80@ 81	Lopori strip, prime.... 102@103
Cameroon ball.....	67@ 68	Ikelemba..... 107@108
		Madagascar, pinky.... 83@ 84

## CENTRALS.

Esmeralda, sausage....	86 @87
Guayaquil, strip.....	75 @76
Nicaragua, scrap....	84 @85
Panama, slab.....	64 @65
Mexican, scrap.....	86 @87

Mexican, slab.....	64 @65
Mangabeira, sheet.....	50 @58

## EAST INDIAN.

Assam.....	98 @99
Borneo.....	12 @43

## Late Pará cables quote:

	Per Kilo.		Per Kilo.
Islands, fine .....	6\$500	Upriver, fine.....	7\$150
Islands, coarse .....	3\$100	Upriver, coarse.....	4\$650
Exchange, 15d.			

## Last Manáos advices:

Upriver, fine.....	7\$100	Upriver, coarse.....	4\$200
Exchange, 15d.			

## NEW YORK RUBBER PRICES FOR FEBRUARY (NEW RUBBER).

	1904.	1903.	1902.
Upriver, fine.....	1.25@1.29	1.01@1.07	84 @90
Upriver, coarse.....	93@ 96	82@ 86	70 @73
Islands, fine.....	1.22@1.26	99@1.04	82 @87
Islands, coarse.....	70@ 75	64@ 67	50 @54
Cametá.....	70@ 76	64@ 67	52 @57

## Statistics of Para Rubber (Excluding Caucho).

	NEW YORK.		Total 1904.	Total 1903.
	Fine and Medium.	Coarse.		
Stocks, January 31 .. tons	123	34 =	157	61
Arrivals, February.....	945	425 =	1370	2827
Aggregating.....	1068	459 =	1527	2591
Deliveries, February.....	936	45 =	1391	2476
Stocks, February 28... ..	132	4 =	136	115

	PARÁ.			ENGLAND.		
	1904.	1903.	1902.	1904.	1903.	1902.
Stocks, January 31 tons	1256	505	155	355	590	1050
Arrivals, February....	3430	3680	4740	800	765	1110
Aggregating .....	4686	4245	4895	1155	1355	2160
Deliveries, February..	3876	3810	4865	850	975	1025
Stocks, Feb. 28..	810	435	30	305	280	1135

World's visible supply, February 28.... tons	3894	2867	3945
Pará receipts, July 1 to February 28.....	19,456	19 200	17,801
Pará receipts of Caucho, same dates.....	2504	2304	1700
Afloat from Pará to United States, Feb. 28..	1898	903	1188
Afloat from Pará to Europe, February 28...	745	1024	1283

## Rubber Receipts at Manáos.

DURING February and eight months of the crop season for three years [courtesy of Messrs. Witt & Co.]:

FROM—	FEBRUARY.			JULY—FEBRUARY.		
	1904.	1903.	1902.	1904.	1903.	1902.
Rio Purús—Acre..... tons	1049	1080	1838	4825	4931	4473
Rio Madeira.....	411	297	360	2291	2088	1838
Rio Jurúa.....	904	672	786	2634	2782	2801
Rio Javary—Iquitos.....	233	273	78	2288	2068	1330
Rio Solimões.....	119	119	89	722	654	1165
Rio Negro.....	167	91	124	506	358	449
Total .....	2883	2532	3275	13 266	12 916	12 056
Caucho.....	811	517	571	2853	2130	1767
Total.....	3694	3049	3846	15 119	15 046	13 823

## Antwerp.

TO THE EDITOR OF THE INDIA RUBBER WORLD: The price realized at our inscription sale on February 22 exceeded all records. All the rubber offered—278 tons—found buyers at an average advance of about 50 centimes per kilo over former prices, or between 5 and 5½ per cent. Large buying orders sent



Comptoir des Produits Coloniaux.....	(Ekela Kadel Sangha)	4,000	
Do .....	(Société "N'Goko" Sangha)	3,500	
Cie. Commerciale des Colonies....	(La Haut Sangha)	12,000	
Do .....		1,400	328,600
<i>Italy.</i>			

<i>Italy.</i>				
IMPORTS AND EXPORTS OF RUBBER.				
	1903.	1902.	1901.	1900.
Imports . . . . . pounds	1,402,500	1,552,760	1,466,960	1,471,360
Exports . . . . .	212,520	138,380	148,720	140,580
Net Imports . . . . .	1,189,980	1,414,380	1,318,240	1,330,780

EDWARD TILL & CO. [March 1] report stocks:

		1905.	1904.	1903.
LONDON	{ Pará sorts.....	<i>tons</i> —	—	—
	{ Borneo.....	11	16	27
	{ Assam and Rangoon.....	2	4	2
	{ Penang.....	120	—	—
	{ Other sorts....	149	207	191
	Total.....	282	227	220
LIVERPOOL	{ Pará.....	304	386	1151
	{ Caucho.....	201	65	161
	{ Other sorts.....	477	458	407
	Total, United Kingdom.....	1264	1136	1939

Total, United Kingdom.....	1264	1136	1939
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PRICES PAID DURING FEBRUARY.

PRICES PAID DURING FEBRUARY.

	1903.			1904.			1905.		
Pará fine, hard.....	5/3	@5/4	4 1/4	4/4	4 1/2 @4/6	6	3/6	@3/9	
Do soft.....	5/0 1/2	@5/3 1/2	4/3	3/4	5		3 1/2	@3/9	
Negroheads, scrappy.	3/11	@4/4	3/3	4 1/2 @3/5 3/4			2/10	@3/0 1/2	
Do Cametá.....	3/1	@3/3	3	2 8	@2/10 1/4		2/3 1/2	@2/5 1/2	
Bolivian.....	5/3	@5/5	5	4/4 1/2 @4/6 1/2			No sales		
Caucho, ball.....	3/3 1/4	@3/4 1/2	3/3	2 1/4 @3/3	3		2/9 3/4	@2/11	
Do slab.....	3/0 1/2	@3/1	4	2	9 1/2		2/3	@2/4 1/2	
Do tusk.....	3/0 1/2	@3/2	2	No sales			No sales		

market has continued strong

MARCH 18.—The market has continued strong and considerable business has been done at dearer rates, but to-day an easier tone prevails and the best prices have not been obtained. Sales of fine hard Pará, spot and near delivery, at 5*s.* 7½*d.* @ 5*s.* 8½*d.* and since at 5*s.* 8*d.* and sellers, and distant delivery 5*s.* 9*d.* Soft fine afloat sold at 5*s.* 7½*d.* and entrefine 5*s.* 6½*d.* Negroheads in good demand at dearer prices. No sales of Bolivian reported; value of fine 5*s.* 8½*d.* Small sales of fine Mollendo 5*s.* 7½*d.* Medium grades in good demand and of the fair supplies in auction to day a large proportion sold at high prices. Columbian good, clean white sheet 3*s.* 7½*d.* @ 3*s.* 8¼*d.*; Central American good scrap and sheet 3*s.* 8¾*d.*; Madagascar fair to good pinky 3*s.* 6*d.* @ 3*s.* 7½*d.*; mixed pinky and part scrap 3*s.* 4½*d.* @ 3*s.* 5*d.*; fair Majunja 2*s.* 10*d.* @ 2*s.* 10½*d.*; Mozambique, gummy ball 4*s.*; large lively ball 3*s.* 8*d.*; softish white and Lamu ball, 3*s.* 7*d.*

## PLANTATION RUBBER.

*March 3 Auction.*—Twenty packages offered and eleven sold. Ceylon biscuits at 6s. 3½d. to 6s. 5d. [= \$1.55 to \$1.56]; inferior brittle at 6s. Straits, fine biscuits at 6s. 4½d.; weakish ditto at 6s. 2d.; dirty scrap at 2s. 6d. Also: Manicoba 75 bales offered and sold, fine Plantation sheet at 5s. 14½ [8s. 24½]; rather dirty scrap at 3s.

*March 17 Auction.*--Thirty nine packages offered and 8 sold. **Ceylon** fine thin biscuits at 6s. 6d to 6s. 9d.; fair clean scrap at 4s. 8d. **Straits** fine thin biscuits at 6s. 9d. [= \$1.64 $\frac{1}{2}$ ].

LIVSEY & Co. (LIVERPOOL), LIMITED, with £20,000 capital, registered March 6, to acquire and continue the business of India-rubber and general produce merchants carried on since 1898 by Livesey & Co. The directors are James R. Livesey, F. Smith, and L. Sgal.

*Liverpool.*

WILLIAM WRIGHT & Co. report [March 1]:

*Fine Pard.*—There has been a strong demand, spot and near, and prices have again advanced 2d. per pound. In spite of the fact that receipts are coming forward plentifully, there is no pause in the demand or the upward trend of prices, and, as far as we can see, the probabilities are that still higher rates than those now ruling will be paid later on in the season. Market closing firm, with Upriver 5s. 4 $\frac{3}{4}$ d., Islands 5s.

### DETAILS.

DETAILS.	1900.	1901.	1902.	1903.	1904.
Stocks, Jan. 31. <i>kilos</i>	299,348	426,165	134,135	643,660	648,631
Arrivals, February ..	621,946	364,466	545,813	667,115	459,632
Congo sorts .....		290,901	473,713	587,293	431,425
Other sorts .....	125,025	73,565		19,822	28,207
Aggregating ...	921,294	790,631	679,948	1,250,814	1,108,263
Sales, February ...	302,774	455,541	204,410	265,994	327,163
Stocks, Feb. 28 ..	557,400	335,090	475,538	984,820	781,100
Arrivals since Jan. 1	947,027	886,725	717,673	1,243,358	1,003,258
Congo sorts .....	736,027		610,251	1,243,358	874,498
Other sorts .....	211,000	210,043			128,760
Sales since Jan. 1 ..	930,988	1,112,533	900,240	673,247	836,197

## RUMER AFFAIRS AT ANTWERP.

MARCH 15.—By the *Philippeville*, from the Congo:

Bunge & Co. .... (Société Générale Africaine)	kilos	97,000
Do .....		22,700
Do .....	K. mit Special Katanga	14,000
Do .....	(Chemins de fer Grand Lacs)	12,000
Do .....	(Société La Katanga)	2,500
Do .....	(Sultanats du Haut Obangi)	15,000
Société A. B. I. R. ....		18,000
Comptoir Commercial Congolais .....		4,500
M. S. Cols. ....	(Alima)	4,000
Société Coloniale Anversoise .....		5,000
Do .....	(Cie. du Kasai)	105,000
Do .....	(Süd Kamerun)	4,000
Charles Dethier .....	(Société Belgika)	1,000
G. & C. Kreglinger .....	(La Lobay)	3,000

4d. For delivery there has been a good demand, but quantity sold small, owing to the nervousness of sellers. March sold 5s 4¾d., value of March-April or April-May, 5s. 5d.

*Manicoba*.—In good request at steady rates, with the exception of last arrivals. All the first hand stock sold. Supplies will now continue to fall. *Ceara*.—Scrap in good request at steady rates, and a considerable business done; most of the better quality lots sold.

## IMPORTS FROM PARA AT NEW YORK.

[The Figures Indicate Weights in Pounds.]

### March 1.—By the steamer *Hubert*, from Manáos and Pará:

IMPORTERS.	Fine.	Medium.	Coarse.	Caucho.	Total.
Poel & Arnold...	494,700	129,500	119,200	72,100=	815,500
General Rubber Co....	405,700	92,900	160,900	70,300=	729,800
A. T. Morse & Co....	149,300	70,300	101,800	200,400=	521,800
New York Commercial Co.	145,100	27,900	40,700	300=	214,000
Neale & Co.....	27,400	8,100	32,700	.....=	68,200
Lionel Hagenaers & Co..	9,100	.....	.....	.....=	9,100
Hagemeyer & Brunn....	4,400	.....	1,900	.....=	6,300

Total ..... 1,235,700 328,700 457,200 343,100=2,364,700

### March 8.—By the steamer *Bernard* from Manáos and Pará:

Poel & Arnold.....	273,700	113,700	197,900	17,300=	602,600
General Rubber Co....	205,800	59,800	150,200	51,900=	467,700
New York Commercial Co.	262,000	59,800	112,600	108,600=	543,000
A. T. Morse & Co....	95,200	21,100	150,100	164,400=	430,800
Neale & Co.....	8,800	2,500	62,600	17,800=	91,700

Lionel Hagenaers & Co..	16,200	.....	31,400	.....=	47,600
Edmund Reeks & Co....	15,000	.....	20,900	4,000=	39,900
Thomsen & Co.....	10,900	.....	20,500	.....=	31,400
Hagemeyer & Brunn....	11,400	.....	13,300	4,900=	29,600

Total..... 899,000 256,900 759,500 368,900=2,284,300

### March 16.—By the steamer *Cearense*, from Manáos and Pará:

Poel & Arnold.....	397,300	79,600	179,400	75,800=	732,100
A. T. Morse & Co.....	211,200	37,600	122,400	60,000=	431,200
New York Commercial Co.	161,100	35,500	66,000	65,600=	328,200
General Rubber Co....	146,400	22,900	58,600	19,700=	247,600
Neale & Co.....	13,900	2,700	29,000	2,000=	47,600
Lionel Hagenaers & Co..	15,800	.....	17,500	.....=	33,300
Hagemeyer & Brunn....	6,000	1,000	20,000	.....=	27,000
Edmund Reeks & Co....	8,100	.....	16,700	.....=	24,800

Total..... 959,800 179,300 509,600 223,100=1,871,800

### March 27.—By the steamer *Hildebrand*, from Manáos and Pará:

Poel & Arnold.....	371,700	86,900	96,000	61,000=	615,600
New York Commercial Co.	116,100	25,500	90,000	110,600=	342,200
A. T. Morse & Co.....	132,900	30,900	94,700	79,100=	337,600
General Rubber Co....	78,800	19,600	48,200	45,500=	192,100
Neale & Co.....	17,500	2,800	45,800	.....=	66,100
Edmund Reeks & Co....	20,000	6,600	7,700	.....=	34,300
Lionel Hagenaers & Co..	11,800	.....	9,200	.....=	21,000
Thomsen & Co.....	.....	.....	18,500	.....=	18,500

Total..... 748,800 172,300 410,100 296,200=1,627,400

[NOTE.—The steamer *Duxbury*, from Pará, is due at New York April 3 with 830 tons Rubber and 125 tons Caucho.]

## PARA RUBBER VIA EUROPE.

POUNDS.

### FEB. 24.—By the *Baltic*=Liverpool:

Poel & Arnold (Coarse).....	11,000	
Poel & Arnold (Caucho).....	60,000	71,000

### FEB. 27.—By the *Etruria*=Liverpool:

General Rubber Co. (Fine).....	40,000	
New York Commercial Co. (Fine).....	16,500	
A. T. Morse & Co. (Coarse).....	27,000	83,500

### MAR. 2.—By the *Teutonic*=Liverpool:

Poel & Arnold (Caucho).....	25,000	
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### MAR. 30.—By the *City of Washington*=Mollendo:

Flint & Co. (Caucho).....	5,600	
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### MAR. 31.—By the *Lucania*=Liverpool:

General Rubber Co. (Fine).....	25,000	
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## OTHER ARRIVALS IN NEW YORK

### CENTRALS.

POUNDS.

### FEB. 24.—By *El Alba*=New Orleans:

A. T. Morse & Co.....	6,500	
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### FEB. 27.—By the *Monterey*=Mexico:

Harburger & Stack.....	1,500	
Fredk Probst & Co.....	1,000	
H. Marquardt & Co.....	500	
L. N. Chemedlin & Co.....	500	3,500

### FEB. 28.—By the *Menominee*=London:

Poel & Arnold.....	22,000	
Rubber Trading Co.....	2,500	24,500

### FEB. 28.—By the *Proteus*=New Orleans:

A. T. Morse & Co.....	2,500	
A. N. Rotholz.....	1,500	
Manhattan Rubber Mfg. Co.....	1,500	5,500

### MAR. 1.—By the *Bygonia*=Tampico:

George A. Alden & Co.....	50,000	
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### MAR. 1.—By the *Hubert*=Ceara:

Emile Boris.....	9,500	
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### MAR. 2.—By the *Teutonic*=Liverpool:

George A. Alden & Co.....	22,000	
Wallace L. Gough.....	4,000	26,000

### MAR. 1.—By the *Advance*=Colon:

G. Amsinck & Co.....	16,000	
Hirzel, Feltman & Co.....	11,500	
Dumarest Bros. & Co.....	3,800	
A. M. Capen's Sons.....	3,000	
Gabriel Perigault.....	3,100	
J. A. Medina & Co.....	2,600	
Lawrence Johnson & Co.....	2,100	
D. A. DeLima & Co.....	2,000	
A. Rosenthal's Sons.....	1,900	
Otto Gerdau.....	1,700	
Isaac Brandon & Bros.....	1,700	
Roldan & Van Sickle.....	1,600	
E. B. Strout.....	1,500	

### CENTRALS—Continued.

Eggers & Heinlein.....	800	
A. D. Straus & Co.....	800	
Kunhardt & Co.....	800	
Isaac Kuble & Co.....	800	
Neuss, Hesslein & Co.....	700	
Meyer Hecht.....	700	
Smithers, Nordenholt & Co.....	700	
A. Santos & Co.....	700	58,700

### MAR. 4.—By the *Españanza*=Mexico:

H. Marquardt & Co.....	3,700	
W. Loayza & Co.....	1,000	
Strube & Utze.....	3,500	
E. Steiger & Co.....	1,000	9,400

### MAR. 3.—By the *Pennsylvania*=Hamburg:

Poel & Arnold.....	22,000	
A. T. Morse & Co.....	5,000	
Rubber Trading Co.....	4,000	31,000

### MAR. 6.—By the *Comis*=New Orleans:

A. T. Morse & Co.....	8,000	
Manhattan Rubber Mfg. Co.....	3,000	
G. Amsinck & Co.....	1,000	
Eggers & Heinlein.....	1,500	13,500

### MAR. 7.—By the *Altat*=Colombia:

Sperling & Williams.....	2,500	
Laurence Johnson & Co.....	1,500	
American Trading Co.....	800	
Banco de Exportasos.....	700	5,500

### MAR. 10.—By the *Finance*=Colon:

G. Amsinck & Co.....	3,500	
Hirzel, Feltman & Co.....	3,500	
Plza, Nephews & Co.....	3,000	
Gabriel Perigault.....	1,500	
Isaac Brandon & Bros.....	1,000	12,500

### MAR. 10.—By *El Sud*=New Orleans:

A. N. Rotholz.....	3,500	
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### MAR. 11.—By the *Tintoretto*=Bahia:

Hirsch & Kaiser.....	15,000	
J. H. Rossbach & Bros.....	17,000	
A. D. Hitch & Co.....	13,000	45,000

### MAR. 11.—By the *Adirondack*=Honduras:

G. Amsinck & Co.....	2,000	
Eggers & Heinlein.....	2,000	
A. S. Lascellas & Co.....	1,500	5,500

### MAR. 11.—By the *Vigilante*=Mexico:

Harburger & Stack.....	3,000	
H. Marquardt & Co.....	2,000	
E. Steiger & Co.....	1,000	6,000

### MAR. 13.—By the *Umbria*=Liverpool:

George A. Alden & Co.....	7,000	
Wallace L. Gough.....	5,000	12,000

### MAR. 13.—By the *Minnichaha*=London:

George A. Alden & Co.....	11,000	
Poel & Arnold.....	5,500	16,500

### MAR. 15.—By the *Sarnia*=Colombia:

Isaac Brandon & Bros.....	10,000	
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### CENTRALS—Continued.

A. Held.....	1,500	
Isaac Kuble & Co.....	1,500	13,000

### MAR. 15.—By the *Sequencia*=Colon:

G. Amsinck & Co.....	12,600	
J. A. Medina & Co.....	7,100	
Roldan & Van Sickle.....	4,000	
Hirzel, Feltman & Co.....	4,000	
Gabriel Perigault.....	4,000	
Meyer Hecht.....	2,800	
A. M. Capen's Sons.....	2,800	
American Trading Co.....	2,500	
Dumarest Bros. & Co.....	2,400	
E. B. Strout.....	1,200	
D. A. DeLima & Co.....	1,200	
Mecke & Co.....	1,600	
Lawrence Johnson & Co.....	1,100	
Silva, Bussentup & Co.....	1,100	
A. Santos & Co.....	700	52,000

### MAR. 18.—By the *Excelsior*=New Orleans:

A. T. Morse & Co.....	3,500	
Manhattan Rubber Mfg. Co.....	1,500	5,000

### MAR. 18.—By the *Havana*=Mexico:

H. Marquardt & Co.....	2,000	
Harburg & Stack.....	2,000	
Graham, Hinkley & Co.....	1,000	
Markt, Struller & Co.....	1,000	
L. N. Chemedlin & Co.....	600	6,600

### MAR. 20.—By the *City of Washington*=Colon:

G. Amsinck & Co.....	4,000	
Hirzel, Feltman & Co.....	1,500	
Eggers & Heinlein.....	1,000	6,500

### MAR. 20.—By the *Cedric*=Liverpool:

Wallace L. Gough.....	11,000	
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### MAR. 21.—By the *Alleghany*=Columbia:

Pedro A. Lopez.....	2,500	
G. Amsinck & Co.....	2,500	
Lawrence Johnson & Co.....	1,000	
Graham Hinkley & Co.....	1,000	7,500

### MAR. 21.—By the *Lucania*=Liverpool:

George A. Alden & Co.....	17,000	
A. T. Morse & Co.....	5,000	21,000

### MAR. 21.—By *El Monte*=New Orleans:

A. T. Morse & Co.....	5,500	
Manhattan Rubber Mfg. Co.....	1,500	7,000

### MAR. 23.—By the *Tennyson*=Bahia:

J. H. Rossbach & Bros.....	30,000	
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### MAR. 23.—By the *Adriatic*=Colon:

E. B. Strout.....	5,500	
Isaac Brandon & Bros.....	1,500	
Gabriel Perigault.....	1,500	11,500

## AFRICANS.

POUNDS.

### FEB. 24.—By the *Vaderland*=Antwerp:

Rubber Trading Co.....	2,000	
Poel & Arnold.....	20,000	
A. T. Morse & Co.....	13,500	
Henry A. Gould Co.....	3,000	61,500



1911, 1912, 1913, 1914, 1915, 1916, 1917, 1918, 1919, 1920, 1921, 1922, 1923, 1924, 1925, 1926, 1927, 1928, 1929, 1930, 1931, 1932, 1933, 1934, 1935, 1936, 1937, 1938, 1939, 1940, 1941, 1942, 1943, 1944, 1945, 1946, 1947, 1948, 1949, 1950, 1951, 1952, 1953, 1954, 1955, 1956, 1957, 1958, 1959, 1960, 1961, 1962, 1963, 1964, 1965, 1966, 1967, 1968, 1969, 1970, 1971, 1972, 1973, 1974, 1975, 1976, 1977, 1978, 1979, 1980, 1981, 1982, 1983, 1984, 1985, 1986, 1987, 1988, 1989, 1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024, 2025, 2026, 2027, 2028, 2029, 2030, 2031, 2032, 2033, 2034, 2035, 2036, 2037, 2038, 2039, 2040, 2041, 2042, 2043, 2044, 2045, 2046, 2047, 2048, 2049, 2050, 2051, 2052, 2053, 2054, 2055, 2056, 2057, 2058, 2059, 2060, 2061, 2062, 2063, 2064, 2065, 2066, 2067, 2068, 2069, 2070, 2071, 2072, 2073, 2074, 2075, 2076, 2077, 2078, 2079, 2080, 2081, 2082, 2083, 2084, 2085, 2086, 2087, 2088, 2089, 2090, 2091, 2092, 2093, 2094, 2095, 2096, 2097, 2098, 2099, 2100, 2101, 2102, 2103, 2104, 2105, 2106, 2107, 2108, 2109, 2110, 2111, 2112, 2113, 2114, 2115, 2116, 2117, 2118, 2119, 2120, 2121, 2122, 2123, 2124, 2125, 2126, 2127, 2128, 2129, 2130, 2131, 2132, 2133, 2134, 2135, 2136, 2137, 2138, 2139, 2140, 2141, 2142, 2143, 2144, 2145, 2146, 2147, 2148, 2149, 2150, 2151, 2152, 2153, 2154, 2155, 2156, 2157, 2158, 2159, 2160, 2161, 2162, 2163, 2164, 2165, 2166, 2167, 2168, 2169, 2170, 2171, 2172, 2173, 2174, 2175, 2176, 2177, 2178, 2179, 2180, 2181, 2182, 2183, 2184, 2185, 2186, 2187, 2188, 2189, 2190, 2191, 2192, 2193, 2194, 2195, 2196, 2197, 2198, 2199, 2200, 2201, 2202, 2203, 2204, 2205, 2206, 2207, 2208, 2209, 2210, 2211, 2212, 2213, 2214, 2215, 2216, 2217, 2218, 2219, 2220, 2221, 2222, 2223, 2224, 2225, 2226, 2227, 2228, 2229, 2230, 2231, 2232, 2233, 2234, 2235, 2236, 2237, 2238, 2239, 2240, 2241, 2242, 2243, 2244, 2245, 2246, 2247, 2248, 2249, 2250, 2251, 2252, 2253, 2254, 2255, 2256, 2257, 2258, 2259, 2260, 2261, 2262, 2263, 2264, 2265, 2266, 2267, 2268, 2269, 2270, 2271, 2272, 2273, 2274, 2275, 2276, 2277, 2278, 2279, 2280, 2281, 2282, 2283, 2284, 2285, 2286, 2287, 2288, 2289, 2290, 2291, 2292, 2293, 2294, 2295, 2296, 2297, 2298, 2299, 2300, 2301, 2302, 2303, 2304, 2305, 2306, 2307, 2308, 2309, 2310, 2311, 2312, 2313, 2314, 2315, 2316, 2317, 2318, 2319, 2320, 2321, 2322, 2323, 2324, 2325, 2326, 2327, 2328, 2329, 2330, 2331, 2332, 2333, 2334, 2335, 2336, 2337, 2338, 2339, 2340, 2341, 2342, 2343, 2344, 2345, 2346, 2347, 2348, 2349, 2350, 2351, 2352, 2353, 2354, 2355, 2356, 2357, 2358, 2359, 2360, 2361, 2362, 2363, 2364, 2365, 2366, 2367, 2368, 2369, 2370, 2371, 2372, 2373, 2374, 2375, 2376, 2377, 2378, 2379, 2380, 2381, 2382, 2383, 2384, 2385, 2386, 2387, 2388, 2389, 2390, 2391, 2392, 2393, 2394, 2395, 2396, 2397, 2398, 2399, 2400, 2401, 2402, 2403, 2404, 2405, 2406, 2407, 2408, 2409, 2410, 2411, 2412, 2413, 2414, 2415, 2416, 2417, 2418, 2419, 2420, 2421, 2422, 2423, 2424, 2425, 2426, 2427, 2428, 2429, 2430, 2431, 2432, 2433, 2434, 2435, 2436, 2437, 2438, 2439, 2440, 2441, 2442, 2443, 2444, 2445, 2446, 2447, 2448, 2449, 2450, 2451, 2452, 2453, 2454, 2455, 2456, 2457, 2458, 2459, 2460, 2461, 2462, 2463, 2464, 2465, 2466, 2467, 2468, 2469, 2470, 2471, 2472, 2473, 2474, 2475, 2476, 2477, 2478, 2479, 2480, 2481, 2482, 2483, 2484, 2485, 2486, 2487, 2488, 2489, 2490, 2491, 2492, 2493, 2494, 2495, 2496, 2497, 2498, 2499, 2500, 2501, 2502, 2503, 2504, 2505, 2506, 2507, 2508, 2509, 2510, 2511, 2512, 2513, 2514, 2515, 2516, 2517, 2518, 2519, 2520, 2521, 2522, 2523, 2524, 2525, 2526, 2527, 2528, 2529, 2530, 2531, 2532, 2533, 2534, 2535, 2536, 2537, 2538, 2539, 2540, 2541, 2542, 2543, 2544, 2545, 2546, 2547, 2548, 2549, 2550, 2551, 2552, 2553, 2554, 2555, 2556, 2557, 2558, 2559, 2560, 2561, 2562, 2563, 2564, 2565, 2566, 2567, 2568, 2569, 2570, 2571, 2572, 2573, 2574, 2575, 2576, 2577, 2578, 2579, 2580, 2581, 2582, 2583, 2584, 2585, 2586, 2587, 2588, 2589, 2590, 2591, 2592, 25

MAR. 13.—By the <i>Maracas</i> =Ciudad Bolivar:	
A. T. Morse & Co.....	4,500
MAR. 13.—By the <i>Maracas</i> =Ciudad Bolivar:	
Thebaud Brothers.....	11,000
James P. S. Smith.....	2,000
W. A. S. & Co.....	14,000
MAR. 16.—By the <i>Noordam</i> =Rotterdam:	
Earle Brothers.....	4,500
MAR. 20.—By the <i>St Louis</i> =London:	
W. A. S. & Co.....	7,000

## PORT OF NEW YORK—FEBRUARY.

EAST INDIAN.BOSTON ARRIVALS.

		POUNDS.
FEB. 1.—By the <i>Sagamore</i> =Liverpool:		
George A. Alden & Co.—Centrals....	20,346	
George A. Alden & Co.—African....	30,200	30,446
FEB. 8.—By the <i>Bohemian</i> =Liverpool:		
George A. Alden & Co.—African.....		66,922
FEB. 14.—By the <i>Saxonia</i> =Liverpool:		
George A. Alden & Co.—Centrals....		6,919
FEB. 14.—By the <i>Lancastrian</i> =London:		
George A. Alden & Co.—African....		1,181
FEB. 15.—By the <i>Michigan</i> =Liverpool:		
George A. Alden & Co.—African. ...		23,047
FEB. 17.—By the <i>Canadian</i> =Liverpool:		
Poel & Arnold—African.....	18,881	
George A. Alden & Co.—African....	77,889	96,770
FEB. 23.—By the <i>Cymric</i> =Liverpool:		
Poel & Arnold—Centrals.....	80,500	
Poel & Arnold—African....	61,639	
George A. Alden & Co.—Caucho ...	6,213	
George A. Alden & Co.—African ...	64,860	213,252
FEB. 28.—By the <i>Icarnia</i> =Liverpool:		
George A. Alden & Co.—African....		7,428
Total.....		445,068

## BALATA.

**MAR. 2.**—By the *Grenada*=Ciudad Bolívar:  
A. H. Wapner ..... 125  
F. and B. Brothers ..... 16.00 1850  
**MAR. 6.**—By the *Marquessa*=London:  
Robinson & Tallman ..... 4.50

## UNITED STATES

GREAT BRITAIN.

**References**

M. S. LERMAN, UNGARYWAGNER.30256

January, 1905	2,220,020	531,300	1,658,720
January, 1904	805,860	728,860	77,000
January, 1903	1,021,020	573,400	147,620
January, 1902	1,602,480	448,360	1,154,120
January, 1901	1,280,300	117,200	242,000

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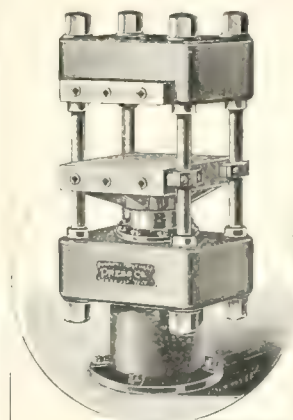
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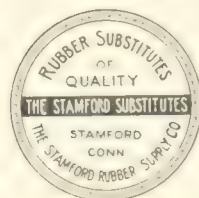
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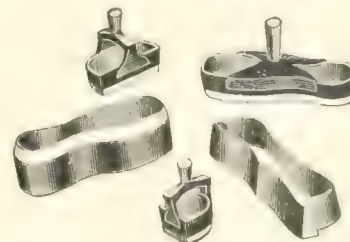
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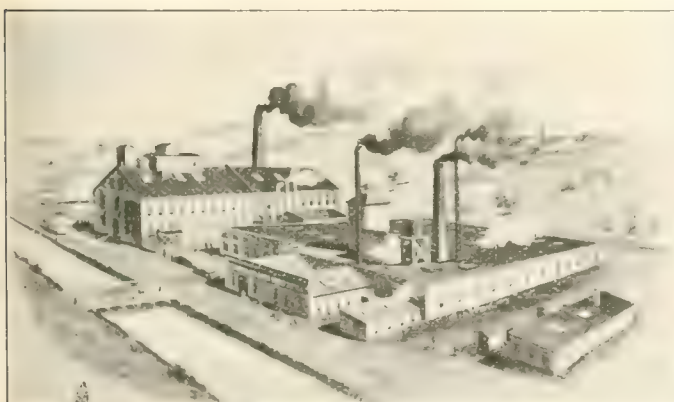
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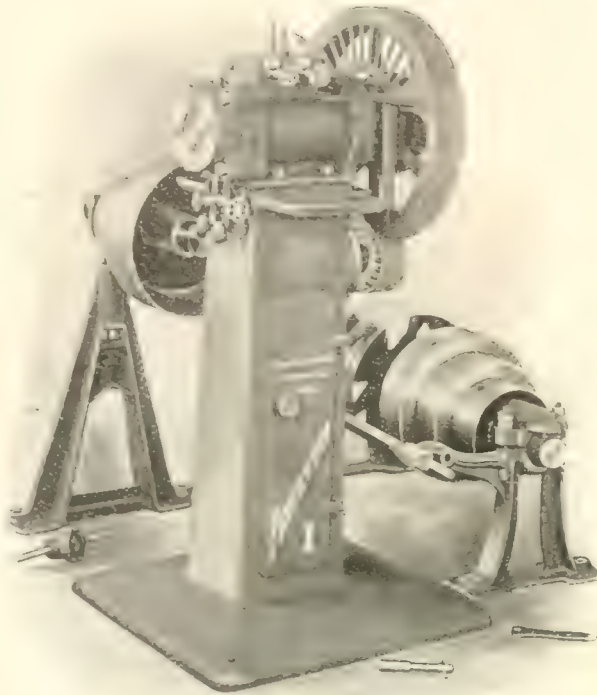
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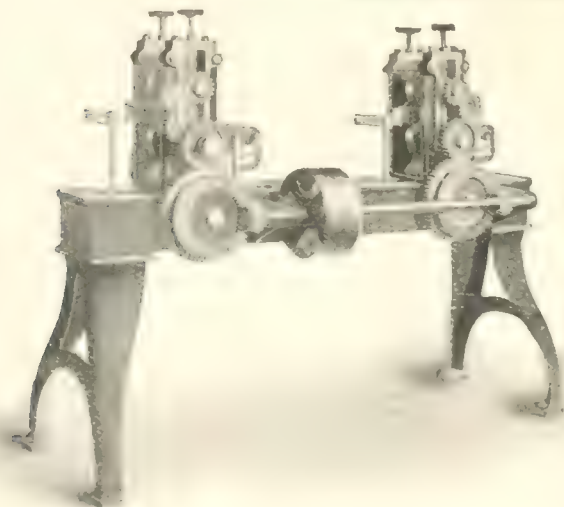
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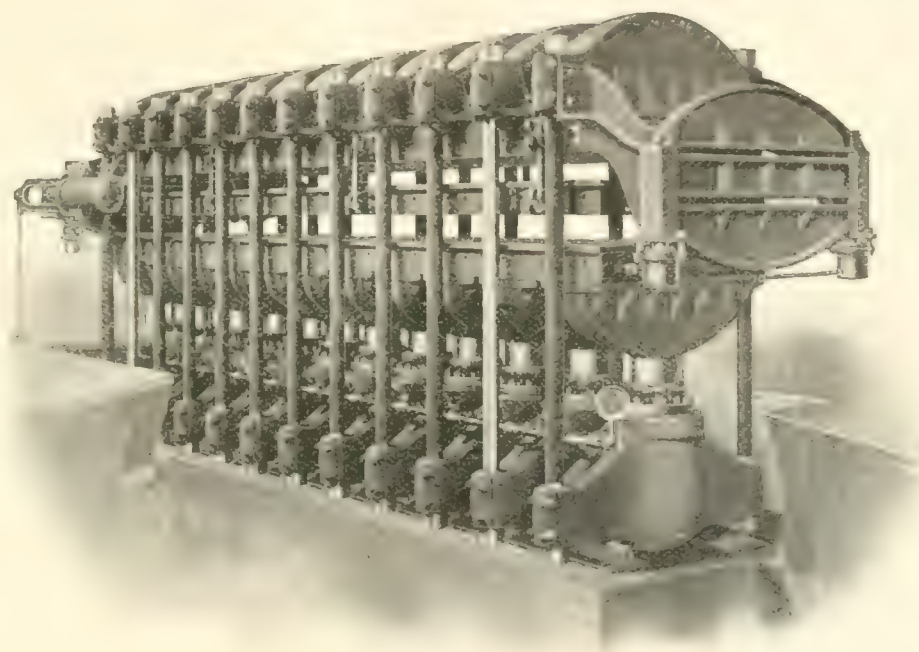
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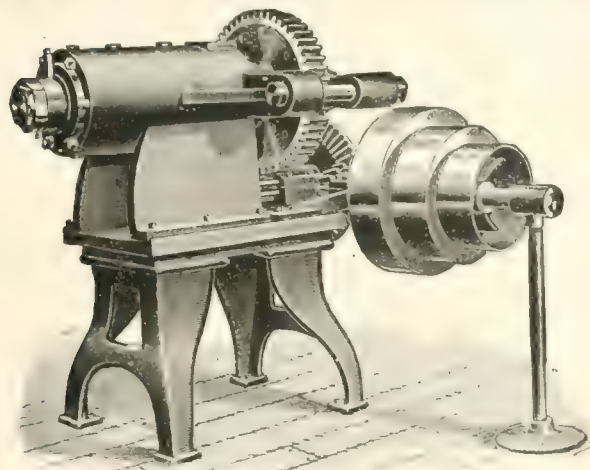
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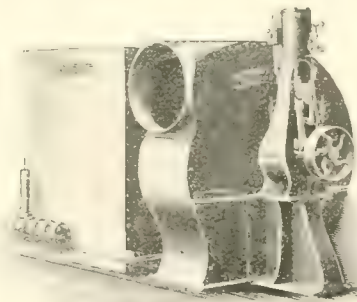
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"The principal difficulty in making such a collection," says Dr. Billings, "has been, first, to overcome the business man's marveling that a public library should want his printed matter, to convince him that we do want it, appreciate it, and are sane in our promise to care for it; and second, to secure a means of receiving regularly his new catalogue, price list, or bulletin, as often as he may issue it."

The value of such a collection increases directly as the number of the productions of individual firms increases. This the library seeks to secure by an invariable request that the name of the library be put upon the mailing list among those addresses to which printed matter is regularly sent by the manufacturer. Once upon the library shelf the trade catalogue is safe, a constant advertisement of the producer, alike useful for the worker in various industrial fields, for the writer on business or technical topics, and even for buyers of goods when the article desired is one not to be found on every hand. Another argument offered by the library is that trade literature is not always long preserved in the manufacturer's own office, so that the manufacturer himself may find it convenient in time to consult the library collection for information regarding his own business.

The great electrical manufacturing companies, and some of the textile and some of the paints manufacturing concerns are mentioned as having given their hearty, appreciative, and effective coöperation to the New York library in the collection of the class of matter here referred to. Space is given to the subject on this page in the hope that it may lead the rubber manufacturers as well to take an interest in the subject.

## A Directory That is Much in Demand.

TO THE INDIA RUBBER WORLD—*Gentlemen*: The writer would very much like to see a sample copy of your valuable magazine. I am especially interested in the advertising section.

Awaiting your pleasure, yours truly,  
Portland, Oregon, February 3, 1905.

WILLIAM WALKER.

THE above brief letter is noticed here, not because there is anything unusual about it, but because so many such letters reach this office. The Editor does not flatter himself that the contents of the reading pages alone attract those who look into THE INDIA RUBBER WORLD—there are too many evidences that the advertisements printed in the paper are of chief interest to numerous readers. The letter just quoted evidently is from a merchant who is thinking about taking on some line of rubber goods; he hears that there is a trade paper, but doesn't know the address; he knows the name, however, and his letter reaches this office. We hope that the paper sent will interest and prove of value to him; its advertising pages certainly will open to him a wide exposition of rubber products. These pages comprise the most complete directory in existence of the producers of rubber goods, and as a directory are in constant request from buyers—actual or prospective.

## How to Keep Up to Date on Rubber Planting.

IN reviewing a small work on rubber planting recently brought out in England, *The Electrician*, a leading London technical journal, remarks:

"With the present volume at hand the prospective planter will have a valuable aid in his work, and he will be well advised if he keeps himself up to date by perusing the issues of THE INDIA RUBBER WORLD, of New York, a journal in which rubber planting interests receive close and regular attention."

## A Word of Appreciation.

TO THE INDIA RUBBER WORLD—*Gentlemen*: We acknowledge with thanks your favor of the 30th, containing information as to the manufacturer of a special device in rubber about which we inquired. This only serves to illustrate the value of your medium, which we highly appreciate. Yours very truly,

THE OHIO RUBBER CO.

Cincinnati, Ohio.

## Back Number Wanted.

WE should appreciate it very much if any of our friends, having copies of THE INDIA RUBBER WORLD of December 1, 1904, which they do not intend filing, should favor us with the same. For copies in good condition we shall be pleased to pay 25 cents each, either in cash or in credits on subscription accounts.

## SPECIAL NOTICES.

OPPORTUNITY—To an experienced man who can invest from \$20,000 to \$50,000 in a new Mechanical Goods factory, the position of Secretary, Treasurer, or Sales Manager can be offered, if he is competent to fill the position. Address T. S. R., care of THE INDIA RUBBER WORLD. [748]

SUPERINTENDENT who has had nearly 20 years' experience in the Mechanical and Reclaiming business will act as Consulting Superintendent. If you want recipes of any kind, or want to match other makes of goods, want to reduce the cost of the goods you are now making, or are having trouble with any of your stocks, write me confidentially. Address B. C. O., care of THE INDIA RUBBER WORLD. [749]

POSITIONS OPEN—A large concern is in need of experienced man to take care of their Druggists' Sundries business; also one for a department making all kinds of Tires. These are responsible positions and require men of training and executive ability. Address F. J. C., care of THE INDIA RUBBER WORLD. [750]

## THE DAYTON RUBBER COMPANY PLANT FOR SALE.

THE assignees of The Dayton Rubber Company, of Dayton, Ohio, will receive sealed bids, at the law office of O. F. Davisson, 20 East Third street, Dayton, Ohio, for the Company's plant, consisting of boilers, engine, mills, washers, calender, presses, supplies and office fixtures, etc. up to April 15, 1905, at 10 o'clock A. M. Immediately after said time for filing bids, all bidders will be permitted to increase their bids, and the highest and best offer will be submitted to the Court for its approval. This plant is equipped complete for the manufacture of mechanical and moulded goods, tires, tiling, mats, matings, etc. The entire plant and equipment are entirely new, the same never having been operated. The entire plant, with the exception of patents has been appraised at \$27,086.58.

For further details apply to the undersigned.

NATHANIEL P. RAMSEY and CLAUDE E. HOOVEN,  
Assignees,

20 East Third street, Dayton, Ohio.

**LASTS** FOR RUBBER SHOES **LAST DESIGNING A SPECIALTY**  
MIDDLESEX LAST CO., Boston, Mass., U. S. A.



# Small Advertisement Department.

## SITUATIONS WANTED.

**CHEMIST**, graduate of Harvard (Chemical course), for several years and at present engaged in research work, desires to connect himself with a rubber works where his general knowledge may be of some use. Would travel. Address CHEMIST, care of THE INDIA RUBBER WORLD. [739]

**FOREMAN**,—Position wanted by Hose Foreman who understands the manufacture of all kinds of Rubber and Cotton Hose. Address HOSE, care of THE INDIA RUBBER WORLD. [737]

**GENERAL FOREMAN** of Press, Lathe, Tubing, Packing, Tire, Specialty, and Wrapped Goods departments, desires to change (good reason). Thoroughly practical and capable of handling help and orders to any extent in up-to-date methods. Has lots of compounds with good records for the manufacture of Mechanical Rubber Goods; can furnish good references; steady, sober and strict and not afraid of hard work. Would like a permanent position with reliable firm if possible near New Jersey or New York, 23 years' experience. Address, C. D. H., care of THE INDIA RUBBER WORLD. [734]

**SALESMEN**.—Two salesmen, one with good trade in Mechanical line, and one with good trade in Druggists' Sundries line, now with large factory, will consider offers on these lines on commission basis, preferably to jobbing trade in Central and Middle West. Address COMMISSION, care of THE INDIA RUBBER WORLD. [741]

**SUPERINTENDENT**.—Middle aged man, remarkably successful in manufacturing Mechanical Goods and Tires of all descriptions, wishes to form new connection with reliable firm, or party with capital to start in the rubber business. Address F. G., care of THE INDIA RUBBER WORLD. [721]

**SUPERINTENDENT or ASSISTANT**.—Position wanted as Superintendent or Assistant by a thoroughly practical man, strictly up in the manufacture of Mechanical Goods and Tires of all kinds. Also knows the reclaiming business, acid or mechanical process; competent to erect new mill or remodel new one; first class office cost methods. Address BUSINESS, care of THE INDIA RUBBER WORLD. [733]

**VARNISH MAKER** wishes a position. Has had a number of years experience in making first class special varnish for Rubber Shoes, and fully understands the heating of Rubber Shoes, and has recipes of different compounds. Address VARNISH, care of THE INDIA RUBBER WORLD. [735]

## SITUATIONS OPEN.

**IMPORTANT ANTWERP HOUSE** desires a reliable and active representative for India-rubber in the United States, well introduced at the principal dealers or manufacturers who are sending buying orders for the inscription sales at Antwerp. Address CAOUTCHOUC, care of "The India Rubber World." [742]

**INDIA-RUBBER TRADE**.—Wanted by one of the largest manufacturing firms in England, a highly qualified gentleman for the position of Works Manager. Must have exceptional experience and organizing ability. Terms of a most liberal nature to a suitable man. Full particulars must be given in replies which will be treated as strictly confidential. Only those who have held similar positions will be entertained. A lengthened engagement given to a suitable gentleman. Address E. E., care of THE INDIA RUBBER WORLD. [746]

**SALESMAN** wanted by large rubber manufacturing company on Clothing and Sundries. Must have had experience in handling large trade. Address, giving full particulars, W. S., care of THE INDIA RUBBER WORLD. [739]

**SALESMEN**—Wanted, four or five good men to sell our Druggist Sundries line on a commission basis. Call or address THE IMPERIAL RUBBER CO., Beach City, Ohio. [743]

**WANTED**.—Salesman, by a manufacturer of improved steam and air hose, a thoroughly competent salesman having experience in selling rubber hose. All communications treated confidentially. Address, by letter only, SPRAGUE ELECTRIC CO., 527 West 34th street, New York. [740]

**WANTED**.—A man thoroughly experienced in running a wire spewing machine on Insulated Wire. Address INSULATED, care of THE INDIA RUBBER WORLD. [738]

**WANTED**.—By a large factory making a full line of Mechanical Rubber Goods and Druggists' Sundries, Calender and Hose Men that can qualify as Foremen; also a Cost Clerk competent to take full charge of the factory records. Liberal compensation will be paid for experienced and able men. Address C. O. S., care of "The India Rubber World." [730]

## FOR SALE.

**ALL KINDS RUBBER WASTE**.—We sell at low price, pure unvulcanized Rubber Scrap from Cement Waste. Write for free sample. Best cash prices paid for rubber scrap and waste. Old Wringer Rolls bought and sold a specialty. UNITED STATES WASTE RUBBER CO., No. 487 N. Warren avenue, Brockton, Mass.

**FOR SALE**.—First-class Cement Churns or Mixers at half value. Address JOSEPH WHITNEY, 48 North Front St., Philadelphia, Pa. [680]

**FOR SALE**.—Two Royle's No. 1 Tubing Machines, with improvements of our own invention, permitting the making of tubings from 1-16 of an inch in diameter outside, walls 2-100 inch in thickness, with tools, drawing up to 13 tubes at a time and self talking and dividing attachments. Also 3x4 ft. autoclave Vulcanizer with galvanized iron drain, racks and 20 plates for it. Address MILLOT BROTHERS, No. 47 West Third Street, New York. [744]

## MACHINERY WANTED.

**WANTED**.—A medium sized Grinder and Mixer, second hand. Furnish a description and state net cash price. Address Box 5, Station M., Boston Mass. [729]

**WANTED**.—To buy a small experimental Calender and Mill in first-class order. Also a small Screw Press and Tubing Machine. Address EXPERIMENTAL, care of THE INDIA RUBBER WORLD. [745]

## SECOND HAND MACHINERY.

**IF it's about second hand Rubber Machinery, write us; if about Scrap Iron, write our competitors, as we do not buy Machinery that is unfit for use. A point to those who want to buy: "We handle all kinds." W. C. COLEMAN CO., Setauket (Long Island), New York.**

## AGENT WANTED FOR AMERICA.

A FRENCH manufacturer of Substitutes desires a General Agent for America, who is thoroughly acquainted with the India Rubber Goods manufacturing trade. Address Mme. F. LEFRANT & CIE., Ham, Somme, France. [692]

## Rubber Mill Machinery For Sale.

**ONE** new Birmingham Spreader, size 50", brand new, never taken out of the case it was shipped in from the factory; one Centrifugal Machine, size about 50" diameter; one large Engine, cylinder 24" x 46", made by Wright, Newburg, in the best condition; both steam and hydraulic Pumps; seven hydraulic Presses, 30" x 30"; three hand Presses, used in making Heels; seven 12" x 36" Grinders; one 15" x 24" Cracker; one 10" x 20" Cracker; one 18" x 40" Calender; one five roll 12" x 44" Calender; fifty Solid Tire Molds (Kelly style), with all sizes of cavities; Bicycle Tire Molds; Pneumatic Tire Molds, and a large lot of other Molds; about 30 tons of Shafting, Pulleys, Hangers; No. 2 Royle Tubing Machine; Boilers, Piping and other kinds of Rubber Mill Machinery; One large Cedar Tank, 23 ft. diameter, 23 ft. high, cedar 3" thick, 13 large iron bands; almost new, and in the best condition; One Box Nailing Machine.

Two Devulcanizers, will stand 125 lbs. working pressure, 6 ft. diameter, 25 ft. long; one Devulcanizer 5 ft. diameter, 25 ft. long, shell one inch thick, complete with tracks and cars; five lead lined Tanks and Washers; four Crackers, 12" x 24"; four Mills, 15" x 36", all complete with shafting, bearings, clutches, etc.; one Hydraulic 9" Ram, 4 opening Press, size of platens 30" x 30"; one two opening Boomer & Boschert Press, size of platens 48" x 48".

**Rubber Mill equipment**, such as extra Gears, Frames, and Rolls, coming in. PHILIP MCGRORY, Trenton, New Jersey.

## PLANTING.

**MANAGER**.—Position wanted as Plantation Manager in Cuba by American who has recently completed contract in Mexico, planting Rubber, Coffee, Vanilla, and Sugar, and prefers Cuba as a place of residence. Best of references. Do not reply unless backed by large capital, as a small proposition will not be considered. Address E. A. K., Havana Post, Havana, Cuba. [747]

**HERBERT S. KIMBALL,**  
**MILL ARCHITECT and ENGINEER,**  
RUBBER FACTORY ENGINEERING.  
101 TREMONT STREET, BOSTON, MASS.

# HIDALGO

A RUBBER AND COFFEE INVESTMENT  
PAYING SIX PER CENT. INTEREST  
ON INSTALLMENT AND CASH SHARES

This Company is under the same management which has made  
*La Zacualpa Rubber Plantation* an acknowledged success.

FOR PARTICULARS AND PRINTED MATTER ADDRESS  
**HIDALGO PLANTATION AND COMMERCIAL COMPANY**

713 MARKET STREET, SAN FRANCISCO, CALIFORNIA

*Mention The India Rubber World when you write.*

## WE ARE MAKING MONEY

FOR OUR STOCKHOLDERS

ON

**Plantations La Florencia and San Andrecito**

Owned by

**BADGER MEXICAN PLANTATION COMPANY.**

Our coffee and sugar cane are producing crops.

Some of our rubber is being tapped.

**STOCK PAYS 7 Per Cent.**

*Write and we will tell you how.*

**FISH & McDUNNOUGH, Fiscal Agents,**

No. 408 UNITY BLDG., CHICAGO, ILL.

OR

**BADGER MEXICAN PLANTATION CO.**

**RACINE, WISCONSIN.**

*Mention the India Rubber World when you write*



# MAKE \$1500 A YEAR WITHOUT SPECULATING



FIVE ACRES of the Ystilja rubber plantation will produce a net income of \$1500.00 or more per year. Shares can be purchased for cash in advance, or on small monthly payments. The dividends earned while paying for your shares will almost equal their cost, and liberal provisions are made for those who cannot keep up the small monthly payments. Rubber trees grow very rapidly and profits from them quickly accumulate into fortunes. Write for our latest book about the plantation, reports of inspectors, etc., full data regarding the growing of rubber, and the cost and profit of shares.

## CONSERVATIVE RUBBER PRODUCTION CO.

920 PARROTT BLDG.

SAN FRANCISCO, - - CAL.

*Mention The India Rubber World when you write.*

## THE MEXICAN MUTUAL PLANTERS COMPANY

Invites attention to the following facts relating to the planting on its plantation "La Junta," of 5554 acres, in the Trinidad Valley, Isthmus of Tehuantepec.

RUBBER.		COFFEE.		CACAO.	
	Acres.		Acres.		Acres.
4 years old,	155.26	4 years old, - - -	29.64	5 years old, - - -	7.5
3 years	39.99	1 year - - -	285.77	2 years - - -	36.
2 years - - -	380.49		315.41	1 year - - -	83.29
1 year	851.58	Contracted, 1905,	142.	Contracted, 1905,	126.79
	2078.32		457.41		100.
Contracted, 1905,	711.				226.79
	2819.32	Approximately 450,000 trees.		Approximately 40,000 trees.	
Approximately 2,000,000 Trees.		Cleared and planted to tame grasses for cattle and horses, 1190 Acres.			

WE began our planting in 1900 and complete it in 1905, making, we believe, the largest planting of cultivated rubber in the world.

We have not paid dividends—the trees must grow first.

We expect to pay a dividend in 1907. From that time we believe they will increase rapidly and afford returns that will amply justify and reward the faith and patience of our investors.

**DIVIDENDS WILL BE PAID ONLY WHEN EARNED.**

We have a few of our plantation bonds for sale, and will be pleased to furnish full information to those interested.

Address: **MEXICAN MUTUAL PLANTERS COMPANY,**

910 Journal Building, CHICAGO, ILLINOIS.



# BUYERS' DIRECTORY OF THE RUBBER TRADE.

CLASSIFIED LIST OF MANUFACTURERS AND DEALERS IN INDIA-RUBBER GOODS AND RUBBER MANUFACTURERS' SUPPLIES.

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## MECHANICAL RUBBER GOODS

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Hose (Fire, Garden, Steam).
Mats and Matting.
Mould Work.
Packing.
Valves.
Washers.

### Mechanical Rubber Goods—General.

Boston Belting Co., Boston-New York.
Boston Woven Hose & Rubber Co.
Bowers Rubber Co., San Francisco, Cal.
Canadian Rubber Co. of Montreal.
Chicago Rubber Wks., Chicago.
Cleveland Rubber Co., Cleveland, O.
Combination Rubber Mfg. Co., Bloomfield, N. J.
Continental Caoutchouc & Gutta-percha Co., Hanover, Germany.
Empire Rubber Mfg. Co., Trenton, N. J.
Eureka Fire Hose Co., New York.
Eureka Rubber Mfg. Co. of Trenton.
B. F. Goodrich Co., Akron, O.
Gutta Percha & Rubber Mfg. Co., N. Y.
Gutta Percha & Rubber Mfg. Co., Toronto.
Home Rubber Co., Trenton, N. J.
Lake Shore Rubber Co., Erie, Pa.
Liverpool Rubber Co., Liverpool, Eng.
Manhattan Rubber Mfg. Co., New York.
Mechanical Rubber Co., New York.
N. J. Car Spring & Rubber Co., Jersey City, N. J.
New York Belting & Packing Co., N. Y.
New York Rubber Co., New York.
North British Rubber Co., Ltd., Edinburgh.
Peerless Rubber Mfg. Co., New York.
Republic Rubber Co., Youngstown, Ohio.
Revere Rubber Co., Boston.
Jos. Stokes Rubber Co., Trenton, N. J.

## MECHANICAL GOODS.

Trenton Rubber Mfg. Co., Trenton, N. J.
Voorhees Rubber Mfg. Co., Jersey City.
Whitman & Barnes Mfg. Co., Akron, O.

### Air Brake Hose.

Boston Belting Co., Boston-New York.
Boston Woven Hose & Rubber Co.
Canadian Rubber Co. of Montreal.
Combination Rubber Mfg. Co., Bloomfield, N. J.
Eureka Rubber Mfg. Co. of Trenton.
B. F. Goodrich Co., Akron, O.
Home Rubber Co., Trenton, N. J.
N. J. Car Spring & Rubber Co., Jersey City.
Peerless Rubber Mfg. Co., New York.
Republic Rubber Co., Youngstown, Ohio.
Revere Rubber Co., Boston-New York.
Voorhees Rubber Mfg. Co., Jersey City.
Whitman & Barnes Mfg. Co., Akron, O.

### Belting (Canvas).

Boston Woven Hose & Rubber Co.
Canadian Rubber Co. of Montreal.
Eureka Fire Hose Co., New York.
Peerless Rubber Mfg. Co., New York.
Revere Rubber Co., Boston-New York.

### Billiard Cushions.

Boston Belting Co., Boston.
Canadian Rubber Co. of Montreal.
Combination Rubber Mfg. Co., Bloomfield, N. J.
B. F. Goodrich Co., Akron, O.
Manhattan Rubber Mfg. Co., New York.
New York Belting & Packing Co., Ltd.
New York Rubber Co., New York.
Revere Rubber Co., Boston-New York.
Whitman & Barnes Mfg. Co., Akron, O.

### Blankets—Printers'.

Boston Belting Co., Boston.
Canadian Rubber Co. of Montreal.
Hodgman Rubber Co., New York.
Liverpool Rubber Co., Liverpool, Eng.
N. J. Car Spring & Rubber Co., Jersey City, N. J.
Revere Rubber Co., Boston-New York.
Voorhees Rubber Mfg. Co., Jersey City.

## MECHANICAL GOODS.

### Brushes.

C. J. Bailey & Co., Boston.
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### Buffers.

Boston Belting Co., Boston-New York.
Canadian Rubber Co. of Montreal.
Liverpool Rubber Co., Ltd., Liverpool.

### "Bull Dog" Packing.

Boston Woven Hose & Rubber Co.
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### Card Cloths.

Canadian Rubber Co. of Montreal.
Mechanical Fabric Co., Providence, R. I.

### Carriage Mats.

Boston Belting Co., Boston-New York.
Boston Woven Hose & Rubber Co.
Canadian Rubber Co. of Montreal.
B. F. Goodrich Co., Akron, O.
Home Rubber Co., Trenton, N. J.
N. J. Car Spring & Rubber Co., Jersey City, N. J.
Peerless Rubber Mfg. Co., New York.
Voorhees Rubber Mfg. Co., Jersey City.

### Coin Mats.

Canadian Rubber Co. of Montreal.
Faultless Rubber Co., Akron, Ohio.
B. F. Goodrich Co., Akron, O.
N. J. Car Spring & Rubber Co., Jersey City, N. J.
New York Belting & Packing Co., N. Y.

### Cord (Pure Rubber).

Boston Belting Co., Boston-New York.
Boston Woven Hose & Rubber Co.
Cleveland Rubber Co., Cleveland, O.
Davol Rubber Co., Providence, R. I.
Empire Rubber Mfg. Co., Trenton, N. J.
Home Rubber Co., Trenton, N. J.
Manhattan Rubber Mfg. Co., New York.
N. J. Car Spring & Rubber Co., Jersey City, N. J.
New York Belting & Packing Co., N. Y.
Peerless Rubber Mfg. Co., New York.
Republic Rubber Co., Youngstown, O.
Revere Rubber Co., Boston-New York.
Voorhees Rubber Mfg. Co., Jersey City.

## MECHANICAL GOODS.

### Deckle Straps.

Boston Belting Co., Boston.
Liverpool Rubber Co., Liverpool, Eng.
Mechanical Rubber Co., Chicago.
New York Belting & Packing Co., N. Y.
Republic Rubber Co., Youngstown, O.
Revere Rubber Co., Boston-New York.

### "Dods" Packing.

Bowers Rubber Co., San Francisco, Cal.
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### Door Springs.

Hodgman Rubber Co., New York.
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### Dredging Sleeves.

Boston Belting Co., Boston-New York.
Boston Woven Hose & Rubber Co.
B. F. Goodrich Co., Akron, O.
Home Rubber Co., Trenton, N. J.
N. J. Car Spring & Rubber Co., Jersey City.
Republic Rubber Co., Youngstown, O.

### Fleshing Bands.

Republic Rubber Co., Youngstown, O.
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### Force Cups.

Hodgman Rubber Co., New York.
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### "Forsyth" Combination Packing.

Boston Belting Co., Boston-New York.
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### Fruit Jar Rings.

Boston Woven Hose & Rubber Co.
Canadian Rubber Co. of Montreal.
Cleveland Rubber Co., Cleveland, O.
B. F. Goodrich Co., Akron, O.
Empire Rubber Mfg. Co., Trenton, N. J.
Eureka Rubber Mfg. Co. of Trenton.
Manhattan Rubber Mfg. Co., New York.
Republic Rubber Co., Youngstown, Ohio.
New York Belting & Packing Co., N. Y.
Whitman & Barnes Mfg. Co., Akron, O.

### Fuller Balls.

B. F. Goodrich Co., Akron, O.
N. J. Car Spring & Rubber Co., Jersey City.



## RUBBER BUYERS' DIRECTORY—CONTINUED.

## MECHANICAL GOODS.

## Fuller Balls—Continued.

Peerless Rubber Mfg. Co., New York.  
Republic Rubber Co., Youngstown, O.  
Whitman & Barnes Mfg. Co., Akron, O.

## Gage Glass Washers.

Boston Belting Co., Boston, Mass.  
Canadian Rubber Co. of Montreal.  
Cleveland Rubber Co., Cleveland, O.  
Empire Rubber Mfg. Co., Trenton, N. J.  
Home Rubber Co., Trenton, N. J.  
Liverpool Rubber Co., Liverpool, Eng.  
Manhattan Rubber Mfg. Co., New York.  
Mechanical Rubber Co., Chicago, Ill.  
N. J. Car Spring & Rubber Co., Jersey City, N. J.  
New York Belting & Packing Co., N. Y.  
New York Rubber Co., New York.  
Revere Rubber Co., Boston, Mass.  
Jos. Stokes Rubber Co., Trenton, N. J.  
Voorhees Rubber Mfg. Co., Jersey City, N. J.

## Gas-Bags (Rubber).

Canadian Rubber Co. of Montreal.  
Cleveland Rubber Co., Cleveland, O.  
Davol Rubber Co., Providence, R. I.  
B. F. Goodrich Co., Akron, O.  
Liverpool Rubber Co., Liverpool, Eng.  
N. J. Car Spring & Rubber Co., Jersey City, N. J.  
Peerless Rubber Mfg. Co., New York.  
Tyler Rubber Co., Andover, Mass.  
Voorhees Rubber Mfg. Co., Jersey City.

## Gasket Tubing.

Canadian Rubber Co. of Montreal.  
Jenkins Bros., New York.

## Hat Bags.

Boston Belting Co., Boston.  
Canadian Rubber Co. of Montreal.  
Home Rubber Co., Trenton, N. J.  
Manhattan Rubber Mfg. Co., New York.  
Mechanical Rubber Co., Chicago.  
N. J. Car Spring & Rubber Co., Jersey City, N. J.  
New York Belting & Packing Co., N. Y.  
New York Rubber Co., New York.  
Peerless Rubber Mfg. Co., New York.  
Republic Rubber Co., Youngstown, O.  
Revere Rubber Co., Boston.

## Horse Shoe Pads.

Canadian Rubber Co. of Montreal.  
Home Rubber Co., Trenton, N. J.  
Peerless Rubber Mfg. Co., New York.  
Plymouth Rubber Co., Stoughton, Mass.  
Revere Rubber Co., Boston-New York.  
Voorhees Rubber Mfg. Co., Jersey City.  
Whitman & Barnes Mfg. Co., Akron, O.

## Hose—Armored.

## Hose—Wire Wound.

Boston Belting Co., Boston-New York.  
Boston Woven Hose & Rubber Co.  
Canadian Rubber Co. of Montreal.  
B. F. Goodrich Co., Akron, O.  
N. J. Car Spring & Rubber Co., Jersey City.  
Peerless Rubber Mfg. Co., New York.  
Republic Rubber Co., Youngstown, O.  
Revere Rubber Co., Boston-New York.  
Voorhees Rubber Mfg. Co., Jersey City.

## Hose Couplings and Fittings.

Boston Woven Hose & Rubber Co.  
Canadian Rubber Co. of Montreal.

## Hose Linings.

Boston Belting Co., Boston-New York.  
Boston Woven Hose & Rubber Co.  
Empire Rubber Mfg. Co., Trenton, N. J.  
Eureka Rubber Mfg. Co., Trenton, N. J.  
N. J. Car Spring & Rubber Co., Jersey City, N. J.  
Peerless Rubber Mfg. Co., New York.

## Hose—Protected.

Boston Belting Co., Boston-New York.  
Revere Rubber Co., Boston-New York.  
Voorhees Rubber Mfg. Co., Jersey City.

## Hose Racks and Reels.

Wirt & Knox Mfg. Co., Philadelphia.

## Hose Rubber Lined.

## COTTON AND LINEN.

Boston Belting Co., Boston-New York.  
Boston Woven Hose & Rubber Co.

## MECHANICAL GOODS.

## Hose—Rubber Lined.—Continued.

## COTTON AND LINEN.

Canadian Rubber Co. of Montreal.  
Cleveland Rubber Co., Cleveland, O.  
Empire Rubber Mfg. Co., Trenton, N. J.  
Eureka Fire Hose Co., New York.  
Eureka Rubber Mfg. Co. of Trenton.  
B. F. Goodrich Co., Akron, O.  
Gutta Percha & Rubber Mfg. Co., N. Y.  
Gutta Percha and Rubber Mfg. Co. of Toronto.  
Home Rubber Co., Trenton, N. J.  
Manhattan Rubber Mfg. Co., New York.  
N. J. Car Spring & Rubber Co., Jersey City, N. J.  
New York Belting & Packing Co., N. Y.  
Peerless Rubber Mfg. Co., New York.  
Republic Rubber Co., Youngstown, O.  
Revere Rubber Co., Boston.  
Jos. Stokes Rubber Co., Trenton, N. J.  
Voorhees Rubber Mfg. Co., Jersey City.  
Whitman & Barnes Mfg. Co., Akron, O.

## Hose—Submarine.

Boston Belting Co., Boston-New York.  
B. F. Goodrich Co., Akron, O.  
Republic Rubber Co., Youngstown, O.

## "Jenkins '96" Packing.

Jenkins Bros., New York.

## Lawn Sprinklers.

Boston Woven Hose & Rubber Co.  
Canadian Rubber Co. of Montreal.

## Mallets (Rubber).

Boston Belting Co., Boston-New York.  
B. F. Goodrich Co., Akron, O.  
Peerless Rubber Mfg. Co., New York.  
Revere Rubber Co., Boston-New York.

## Mould Work.

## [See Mechanical Rubber Goods.]

Davidson Rubber Co., Boston.  
Davol Rubber Co., Providence, R. I.  
Faultless Rubber Co., Akron, O.  
Hardman Rubber Co., Belleville, N. J.  
Hodgman Rubber Co., New York.  
La Crosse (Wis.) Rubber Mills Co.  
Mattson Rubber Co., New York.  
Mitzel Rubber Co., Akron, O.  
National India Rubber Co., Bristol, R. I.  
Plymouth Rubber Co., Stoughton, Mass.  
Tyler Rubber Co., Andover, Mass.

## "Nubian" Packing.

Voorhees Rubber Mfg. Co., Jersey City.

## Oil Well Supplies.

Boston Belting Co., Boston-New York.  
Boston Woven Hose & Rubber Co.  
B. F. Goodrich Co., Akron, O.  
Home Rubber Co., Trenton, N. J.  
Lake Shore Rubber Co., Erie, Pa.  
N. J. Car Spring & Rubber Co., Jersey City.  
Peerless Rubber Mfg. Co., New York.  
Republic Rubber Co., Youngstown, O.  
Revere Rubber Co., Boston-Pittsburgh.  
Voorhees Rubber Mfg. Co., Jersey City.  
Whitman & Barnes Mfg. Co., Akron, O.

## Paper Machine Rollers.

Boston Belting Co., Boston-New York.  
B. F. Goodrich Co., Akron, O.  
Republic Rubber Co., Youngstown, O.  
Revere Rubber Co., Boston-New York.  
Peerless Rubber Mfg. Co., New York.  
Voorhees Rubber Mfg. Co., Jersey City.

## "Perfection" Belting.

Boston Woven Hose & Rubber Co.

## Plumbers' Supplies.

Canadian Rubber Co. of Montreal.  
B. F. Goodrich Co., Akron, O.  
Republic Rubber Co., Youngstown, O.

## Pump Valves.

## [See Mechanical Rubber Goods.]

Jenkins Bros., New York.

## "Rainbow" Packing.

Peerless Rubber Mfg. Co., New York.

## Rings.

Boston Belting Co., Boston-New York.  
B. F. Goodrich Co., Akron, O.  
Peerless Rubber Mfg. Co., New York.  
Plymouth Rubber Co., Stoughton, Mass.  
Republic Rubber Co., Youngstown, O.

## MECHANICAL GOODS.

## Rollers—Rubber Covered.

Boston Belting Co., Boston.  
Canadian Rubber Co. of Montreal.  
Cleveland Rubber Co., Cleveland, O.  
Empire Rubber Mfg. Co., Trenton, N. J.  
Eureka Rubber Mfg. Co. of Trenton.  
B. F. Goodrich Co., Akron, O.  
Home Rubber Co., Trenton, N. J.  
Manhattan Rubber Mfg. Co., New York.  
Mechanical Rubber Co., Chicago.  
N. J. Car Spring & Rubber Co., Jersey City, N. J.  
New York Belting & Packing Co., N. Y.  
Peerless Rubber Mfg. Co., New York.  
Plymouth Rubber Co., Stoughton, Mass.  
Republic Rubber Co., Youngstown, O.  
Revere Rubber Co., Boston-New York.

## Sewing Machine Rubbers.

B. F. Goodrich Co., Akron, O.

## Springs—Rubber.

Boston Belting Co., Boston-New York.  
Canadian Rubber Co. of Montreal.  
B. F. Goodrich Co., Akron, O.  
Hardman Rubber Co., Belleville, N. J.  
Liverpool Rubber Co., Liverpool, Eng.  
N. J. Car Spring & Rubber Co., Jersey City.  
Peerless Rubber Mfg. Co., New York.  
Plymouth Rubber Co., Stoughton, Mass.  
Republic Rubber Co., Youngstown, Ohio.  
Revere Rubber Co., Boston-New York.  
Voorhees Rubber Mfg. Co., Jersey City.

## Stair Treads.

Boston Belting Co., Boston-New York.  
Boston Woven Hose & Rubber Co.  
Canadian Rubber Co. of Montreal.  
Cleveland Rubber Co., Cleveland, O.  
Empire Rubber Mfg. Co., Trenton, N. J.  
Home Rubber Co., Trenton, N. J.  
Liverpool Rubber Co., Liverpool, Eng.  
Manhattan Rubber Mfg. Co., New York.  
N. J. Car Spring & Rubber Co., Jersey City, N. J.  
New York Belting & Packing Co., N. Y.  
New York Rubber Co., New York.  
Peerless Rubber Mfg. Co., New York.  
Republic Rubber Co., Youngstown, O.  
Revere Rubber Co., Boston-New York.  
Voorhees Rubber Mfg. Co., Jersey City.

## Thread.

Mechanical Fabric Co., Providence, R. I.  
Revere Rubber Co., Boston.

## Tiling.

Canadian Rubber Co. of Montreal.  
B. F. Goodrich Co., Akron, O.  
Gutta Percha & Rubber Mfg. Co., N. Y.  
N. J. Car Spring & Rubber Co., Jersey City.  
New York Belting & Packing Co., N. Y.  
Peerless Rubber Mfg. Co., New York.  
Republic Rubber Co., Youngstown, Ohio.  
Voorhees Rubber Mfg. Co., Jersey City.

## Tires.

AUTOMOBILE, BICYCLE, AND CARRIAGE.  
Canadian Rubber Co. of Montreal.  
Continental Caoutchouc & Guttapercha Co., Hanover.  
Empire Rubber Mfg. Co., Trenton, N. J.  
B. F. Goodrich Co., Akron, O.  
Gutta Percha & Rubber Mfg. Co., Toronto.  
Kokomo Rubber Co., Kokomo, Ind.  
Lake Shore Rubber Co., Erie, Pa.  
Liverpool Rubber Co., Liverpool, Eng.  
North British Rubber Co., Ltd., Edinburgh.  
Plymouth Rubber Co., Stoughton, Mass.  
Republic Rubber Co., Youngstown, O.

## AUTOMOBILE AND CARRIAGE.

Boston Belting Co., Boston-New York.  
Revere Rubber Co., Boston-New York.  
Eureka Rubber Mfg. Co., Trenton, N. J.

## Truck Bands.

Boston Belting Co., Boston.  
Cleveland Rubber Co., Cleveland, O.  
Empire Rubber Mfg. Co., Trenton, N. J.  
B. F. Goodrich Co., Akron, O.  
Home Rubber Co., Trenton, N. J.  
Manhattan Rubber Mfg. Co., New York.  
Mechanical Rubber Co., Chicago.  
N. J. Car Spring & Rubber Co., Jersey City, N. J.

## MECHANICAL GOODS.

## Truck Bands—Continued.

New York Belting & Packing Co., N. Y.  
Peerless Rubber Mfg. Co., New York.  
Republic Rubber Co., Youngstown, O.  
Voorhees Rubber Mfg. Co., Jersey City.  
Whitman & Barnes Mfg. Co., Akron, O.

## Tubing.

## [See Mechanical Rubber Goods.]

American Hard Rubber Co., New York.  
Davidson Rubber Co., Boston.  
Davol Rubber Co., Providence, R. I.  
Hardman Rubber Co., Belleville, N. J.  
Plymouth Rubber Co., Stoughton, Mass.  
Tyler Rubber Co., Andover, Mass.

## Tubing (Beer).

Boston Belting Co., Boston-New York.  
Boston Woven Hose & Rubber Co.  
Canadian Rubber Co. of Montreal.  
Faultless Rubber Co., Akron, Ohio.  
B. F. Goodrich Co., Akron, O.  
Peerless Rubber Mfg. Co., New York.  
Plymouth Rubber Co., Stoughton, Mass.  
Republic Rubber Co., Youngstown, O.  
Voorhees Rubber Mfg. Co., Jersey City.

## "Usudurian" Packing.

Revere Rubber Co., Boston-New York.

## Valve Balls.

Boston Belting Co., Boston.  
Cleveland Rubber Co., Cleveland, O.  
Manhattan Rubber Mfg. Co., New York.  
Mechanical Rubber Co., Chicago.  
New York Belting & Packing Co., N. Y.  
New York Rubber Co., New York.  
Peerless Rubber Mfg. Co., New York.  
Republic Rubber Co., Youngstown, O.  
Whitman & Barnes Mfg. Co., Akron, O.

## Valve Discs.

American Hard Rubber Co., New York.  
Boston Belting Co., Boston-New York.  
B. F. Goodrich Co., Akron, O.  
Peerless Rubber Mfg. Co., New York.  
Republic Rubber Co., Youngstown, O.  
Revere Rubber Co., Boston-New York.

## Valves.

## [See Mechanical Rubber Goods.]

Jenkins Bros., New York-Chicago.  
Plymouth Rubber Co., Stoughton, Mass.

## Wringer Rolls.

Canadian Rubber Co. of Montreal.  
Cleveland Rubber Co., Cleveland, O.  
B. F. Goodrich Co., Akron, O.  
Home Rubber Co., Trenton, N. J.  
Republic Rubber Co., Youngstown, O.

## DRUGGISTS' AND STATIONERS' SUNDRIES

## Atomizers.

## Bandages.

## Bulbs.

## Syringes.

## Water Bottles.

## Druggists' Sundries—General.

American Hard Rubber Co., New York.  
C. J. Bailey & Co., Boston.  
Geo. Borgfeldt & Co., New York.  
Boston Woven Hose & Rubber Co.  
Canadian Rubber Co. of Montreal.  
Cleveland Rubber Co., Cleveland, O.  
Davidson Rubber Co., Boston.  
Davol Rubber Co., Providence, R. I.  
Faultless Rubber Co., Akron, O.  
B. F. Goodrich Co., Akron, O.  
Hanover Rubber Co., Hanover, Germany.  
Hardman Rubber Co., Belleville, N. J.  
Hodgman Rubber Co., New York.  
Mitzel Rubber Co., Akron, O.  
North British Rubber Co., Ltd., Edinburgh.  
Tyler Rubber Co., Andover, Mass.  
Balls, Dolls and Toys.  
Geo. Borgfeldt & Co., New York.  
Canadian Rubber Co. of Montreal.  
Continental Caoutchouc & Guttapercha Co.  
B. F. Goodrich Co., Akron, O.  
Hanover Rubber Co., Hanover, Germany.  
New York Rubber Co., New York.  
Whitman & Barnes Mfg. Co., Akron, O.



## RUBBER BUYERS' DIRECTORY—CONTINUED.

## DRUGGISTS' SUNDRIES

## Combs.

American Hard Rubber Co., New York  
Geo. Borgfeldt & Co., New York  
Hanover Rubber Co., Hanover, Germany.

## Elastic Bands.

Canadian Rubber Co. of Montreal.  
Davidson Rubber Co., Boston.  
Daval Rubber Co., Providence, R. I.  
B. F. Goodrich Co., Akron, O.  
Hodgman Rubber Co., New York-Boston  
Tyer Rubber Co., Andover, Mass.  
Whitman & Barnes Mfg. Co., Akron, O.

## Erasive Rubbers.

Davidson Rubber Co., Boston.  
B. F. Goodrich Co., Akron, O.  
Hardman Rubber Co., Belleville, N. J.  
Mattson Rubber Co., New York.

## Finger Cots.

Faultless Rubber Mfg. Co., Akron, O.  
B. F. Goodrich Co., Akron, O.  
Pure Gum Specialty Co., Barberton, O.

## Gloves.

Canadian Rubber Co. of Montreal.  
Daval Rubber Co., Providence, R. I.  
Faultless Rubber Co., Akron, O.  
B. F. Goodrich Co., Akron, O.  
Pure Gum Specialty Co., Barberton, O.

## Hard Rubber Goods.

American Hard Rubber Co., New York.  
Geo. Borgfeldt & Co., New York.  
Canadian Rubber Co. of Montreal.  
Daval Rubber Co., Providence, R. I.  
Hanover Rubber Co., Hanover, Germany.  
Hardman Rubber Co., Belleville, N. J.  
Stokes Rubber Co., Joseph, Trenton, N. J.  
Tyer Rubber Co., Andover, Mass.

## Hospital Sheetings.

Cleveland Rubber Co., Cleveland, O.  
Davidson Rubber Co., Boston.  
Daval Rubber Co., Providence, R. I.  
Hodgman Rubber Co., New York.  
Plymouth Rubber Co., Stoughton, Mass.  
Tyer Rubber Co., Andover, Mass.

## Hot Water Bottles.

[See Water Bottles.]

## Ice Bags and Ice Caps.

Faultless Rubber Co., Akron, Ohio.  
B. F. Goodrich Co., Akron, O.  
Hardman Rubber Co., Belleville, N. J.  
Pure Gum Specialty Co., Barberton, O.  
Tyer Rubber Co., Andover, Mass.

## Life Preservers.

Hodgman Rubber Co., New York.

## Nipples.

Canadian Rubber Co. of Montreal.  
Cleveland Rubber Co., Cleveland, O.  
Davidson Rubber Co., Boston.  
Daval Rubber Co., Providence, R. I.  
Faultless Rubber Co., Akron, O.  
B. F. Goodrich Co., Akron, O.  
Pure Gum Specialty Co., Barberton, O.  
Tyer Rubber Co., Andover, Mass.

## Sponges (Rubber).

Faultless Rubber Co., Ashland, Ohio.  
B. F. Goodrich Co., Akron, O.

## Stationers' Sundries.

American Hard Rubber Co., New York.  
Geo. Borgfeldt & Co., New York.  
Boston Woven Hose & Rubber Co.  
Canadian Rubber Co. of Montreal.  
Cleveland Rubber Co., Cleveland, O.  
Davidson Rubber Co., Boston.  
Daval Rubber Co., Providence, R. I.  
Faultless Rubber Co., Akron, O.  
B. F. Goodrich Co., Akron, O.  
Hanover Rubber Co., Hanover, Germany.  
Hardman Rubber Co., Belleville, N. J.  
Hodgman Rubber Co., New York-Boston.  
Tyer Rubber Co., Andover, Mass.

## Stopples (Rubber).

Cleveland Rubber Co., Cleveland, O.  
Daval Rubber Co., Providence, R. I.  
Hodgman Rubber Co., New York.  
Manhattan Rubber Mfg. Co., New York.  
New York Belting & Packing Co., N. Y.  
Tyer Rubber Co., Andover, Mass.  
Whitman & Barnes Mfg. Co., Akron, O.

## DRUGGISTS' SUNDRIES.

## Throat Bags.

Cleveland Rubber Co., Cleveland, O.  
Daval Rubber Co., Providence, R. I.  
B. F. Goodrich Co., Akron, O.  
Tyer Rubber Co., Andover, Mass.

## Tobacco Pouches.

Canadian Rubber Co. of Montreal.  
Faultless Rubber Co., Akron, Ohio.  
B. F. Goodrich Co., Akron, O.  
Pure Gum Specialty Co., Barberton, O.  
Tyer Rubber Co., Andover, Mass.

MACKINTOSHED  
AND SURFACE  
GOODS

## Air Goods (Rubber).

Canadian Rubber Co. of Montreal.  
Cleveland Rubber Co., Cleveland, O.  
Daval Rubber Co., Providence, R. I.  
B. F. Goodrich Co., Akron, O.  
Hodgman Rubber Co., New York.  
New York Rubber Co., New York.  
National India Rubber Co., Providence.  
Tyer Rubber Co., Andover, Mass.

## Air Mattresses.

Canadian Rubber Co. of Montreal.  
Mechanical Fabric Co., Providence, R. I.

## Barbers' Bibs.

Daval Rubber Co., Providence, R. I.  
Tyer Rubber Co., Andover, Mass.

## Bathing Caps.

Daval Rubber Co., Providence, R. I.  
B. F. Goodrich Co., Akron, O.

## Bellows Cloths.

Boston Rubber Co., Boston.  
Cleveland Rubber Co., Cleveland, O.  
Hodgman Rubber Co., New York.  
La Crosse (Wis.) Rubber Mills Co.

## Calendering.

La Crosse (Wis.) Rubber Mills Co.  
Milford Rubber Co., Boston.  
Plymouth Rubber Co., Stoughton, Mass.

## Carriage Ducks and Drills.

Cleveland Rubber Co., Cleveland, O.  
Empire Rubber Mfg. Co., Trenton, N. J.  
Kureka Rubber Mfg. Co. of Trenton.  
Gutta Percha & Rubber Mfg. Co., Toronto.

## Clothing.

Apsley Rubber Co., Hudson, Mass.  
Canadian Rubber Co. of Montreal.  
Cleveland Rubber Co., Cleveland, O.  
Granby Rubber Co., Granby, Quebec.  
Gutta Percha & Rubber Mfg. Co. of Toronto.  
Hodgman Rubber Co., New York.  
La Crosse (Wis.) Rubber Mills Co.  
Mann Summer Clothing Co., New York.  
North British Rubber Co., Ltd., Edinburgh.

## Cravenette.

Cravenette Co., Ltd.

## Diving Dresses.

Hodgman Rubber Co., New York.

## Dress Shields.

Hodgman Rubber Co., New York.  
Mattson Rubber Co., New York.

## Horse Covers.

Hodgman Rubber Co., New York.

## Leggings.

Cleveland Rubber Co., Cleveland, O.  
Hodgman Rubber Co., New York.

## Mackintoshes.

[See Clothing.]

## Proofing.

Canadian Rubber Co. of Montreal.  
La Crosse (Wis.) Rubber Mills Co.  
Milford Rubber Co., Boston.  
Plymouth Rubber Co., Stoughton, Mass.

## MACKINTOSHED GOODS.

## Rain Coats.

Cravenette Co., Ltd.

## Rubber Coated Cloths.

Mechanical Fabric Co., Providence, R. I.

RUBBER  
FOOTWEAR

## Boots and Shoes.

American Rubber Co., Boston.  
Boston Rubber Shoe Co., Boston.  
Canadian Rubber Co. of Montreal.  
L. Candee & Co., New Haven, Ct.  
Granby Rubber Co., Granby, Quebec.  
Gutta Percha & Rubber Mfg. Co. of Toronto.  
Hood Rubber Co., Boston.  
Liverpool Rubber Co., Liverpool, Eng.  
Lycorning Rubber Co., Williamsport, Pa.  
Meyer Rubber Co., New York.  
National India Rubber Co., Boston.  
North British Rubber Co., Ltd., Edinburgh.  
United States Rubber Co., New York.  
Wales-Goodyear Rubber Co., Boston.  
Woonsocket Rubber Co., Providence.

## Heels and Soles.

Boston Woven Hose & Rubber Co.  
Canadian Rubber Co. of Montreal.  
Continental Caoutchouc & Guttapercha Co., Hanover.  
Plymouth Rubber Co., Stoughton, Mass.

## Tennis Shoes.

American Rubber Co., Boston.  
Boston Rubber Shoe Co., Boston.  
Granby Rubber Co., Granby, Quebec.  
Liverpool Rubber Co., Liverpool, Eng.  
National India Rubber Co., Providence.  
United States Rubber Co., New York.

## Tennis Soles.

Canadian Rubber Co. of Montreal.  
Jos. Stokes Rubber Co., Trenton, N. J.

## Wading Pants.

Canadian Rubber Co. of Montreal.  
Hodgman Rubber Co., New York.

SPORTING  
GOODS

## Foot Balls.

Canadian Rubber Co. of Montreal.  
Cleveland Rubber Co., Cleveland, O.  
Faultless Rubber Co., Akron, Ohio.  
B. F. Goodrich Co., Akron, O.  
Hodgman Rubber Co., New York.

## Golf Balls.

Boston Belting Co., Boston.  
Canadian Rubber Co. of Montreal.  
Davidson Rubber Co., Boston.  
B. F. Goodrich Co., Akron, O.  
Whitman & Barnes Mfg. Co., Akron, O.

## Submarine Outfits.

Hodgman Rubber Co., New York.

## Sporting Goods.

Canadian Rubber Co. of Montreal.  
Faultless Rubber Co., Akron, Ohio.  
B. F. Goodrich Co., Akron, O.  
Hodgman Rubber Co., New York.  
Tyer Rubber Co., Andover, Mass.

## Striking Bags.

Canadian Rubber Co. of Montreal.  
Faultless Rubber Co., Akron, Ohio.  
B. F. Goodrich Co., Akron, O.  
Pure Gum Specialty Co., Barberton, O.

## Dental Gum.

American Hard Rubber Co., New York.  
Cleveland Rubber Co., Cleveland, O.  
Tyer Rubber Co., Andover, Mass.

## Rubber Dam.

Cleveland Rubber Co., Cleveland, O.  
Daval Rubber Co., Providence, R. I.  
Hodgman Rubber Co., New York.  
Tyer Rubber Co., Andover, Mass.

DENTAL AND  
STAMP RUBBER

## Stamp Gum.

Mattson Rubber Co., New York.  
Mechanical Rubber Co., Chicago, Ill.  
N. J. Car Spring & Rubber Co., Jersey City, N. J.  
New York Belting & Packing Co., N. Y.

## ELECTRICAL

## Electrical Supplies.

American Hard Rubber Co., New York.  
Lake Shore Rubber Co., Erie, Pa.  
Joseph Stokes Rubber Co., Trenton, N. J.  
Massachusetts Chemical Co., Boston.  
Tyer Rubber Co., Andover, Mass.

## Friction Tape.

Boston Belting Co., Boston.  
Boston Woven Hose & Rubber Co.  
Canadian Rubber Co. of Montreal.  
Cleveland Rubber Co., Cleveland, O.  
B. F. Goodrich Rubber Co., Akron, O.  
Massachusetts Chemical Co., Boston.  
Mechanical Rubber Co., Chicago.  
Home Rubber Co., Trenton, N. J.  
Revere Rubber Co., Boston-New York.

## Hard Rubber Goods.

American Hard Rubber Co., New York.  
Canadian Rubber Co. of Montreal.  
Joseph Stokes Rubber Co., Trenton, N. J.

## Insulating Compounds.

Canadian Rubber Co. of Montreal.  
Gutta-Percha & Rubber Mfg. Co., Toronto.  
Massachusetts Chemical Co., Boston.

## Insulated Wire and Cables.

National India Rubber Co., Providence.

## Splicing Compound.

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Canadian Rubber Co. of Montreal.  
B. F. Goodrich Co., Akron, O.  
Manhattan Rubber Mfg. Co., New York.  
N. J. Car Spring & Rubber Co., Jersey City, N. J.  
New York Belting & Packing Co., N. Y.

## Chemical Analyses.

Durand Woodman, Ph. D., New York.  
H. L. Terry, Manchester, England.

## Chemists.

Stephen P. Sharples, Boston, Mass.  
Durand Woodman, Ph. D., New York.

## Investments.

Badger Mexican Plantation Co., Racine, Wis.  
Conservative Rubber Production Co., San Francisco.  
Hidalgo Plantation and Commercial Co., San Francisco.  
Mexican Mutual Rubber Co., Chicago.

## Rubber Lands For Sale.

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## Rubber Planting.

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## Travel.

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Farrel Foundry & Mach. Co., Ansonia, Ct.

## Belt Slitters.

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## Crackers.

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B. F. Sturtevant Co., Boston.

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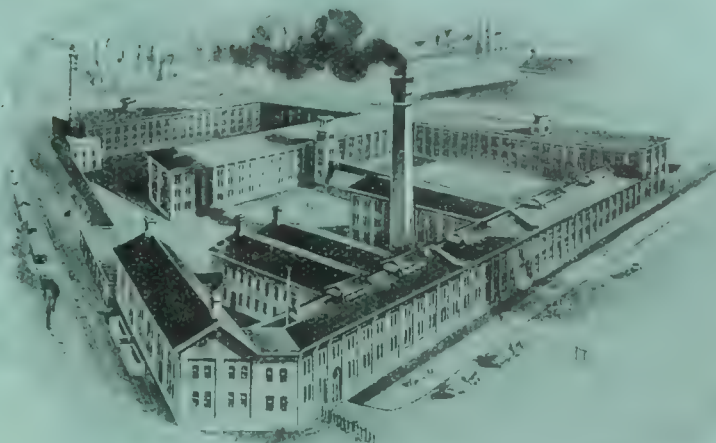
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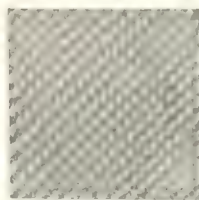
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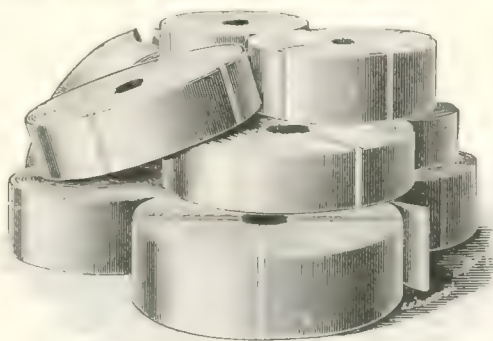
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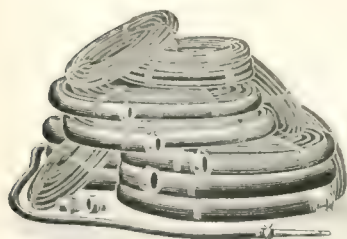


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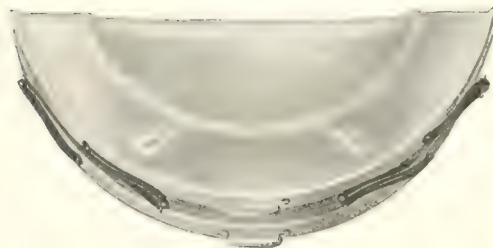
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" C. 25 in. " " "

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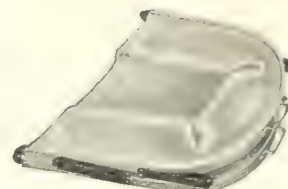
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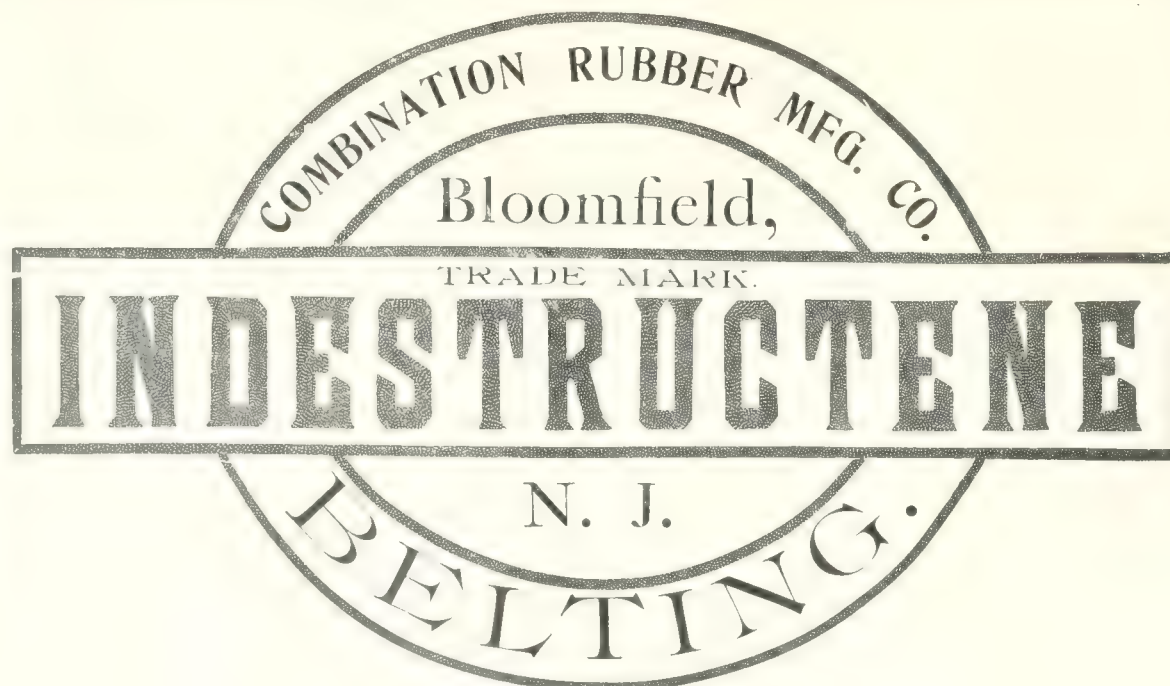
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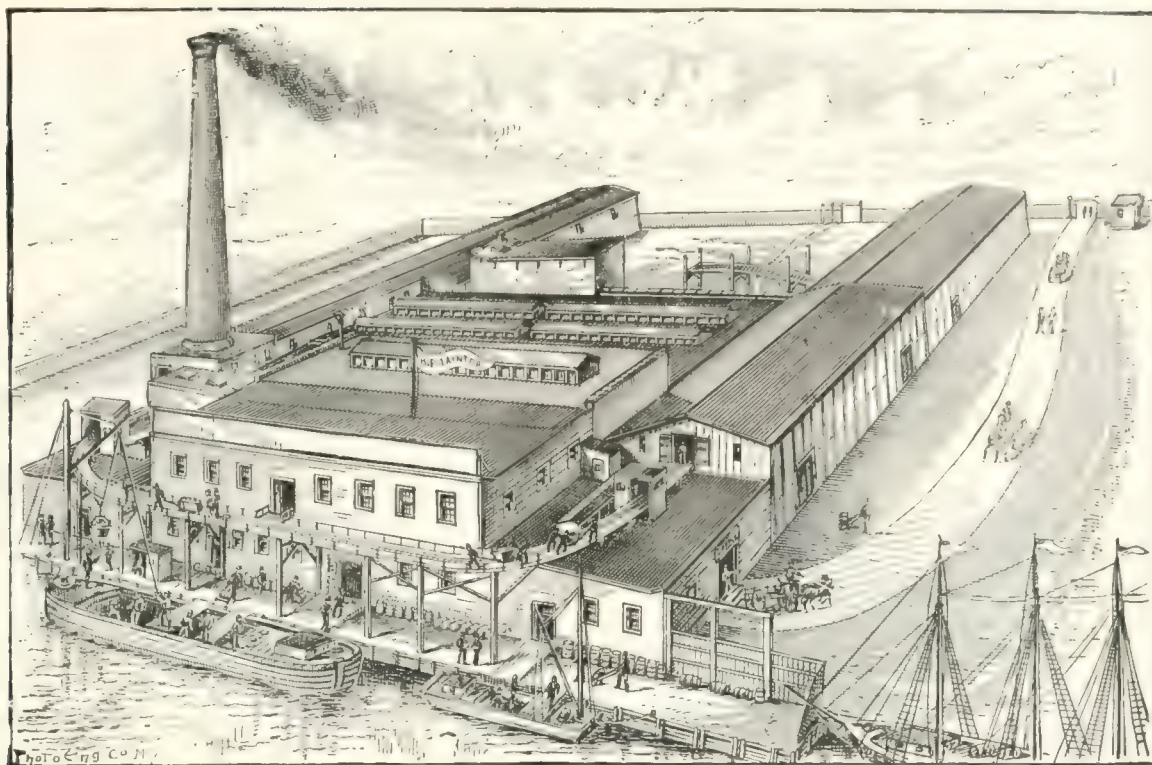
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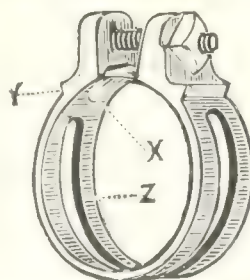
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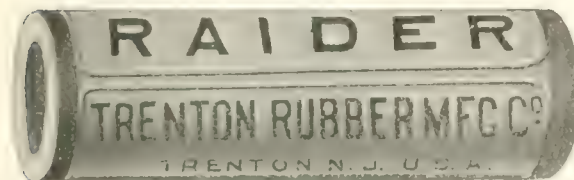
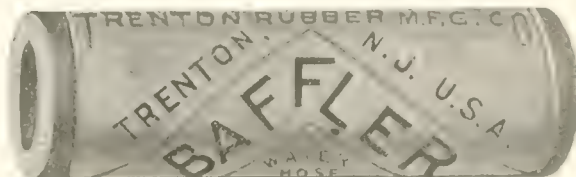
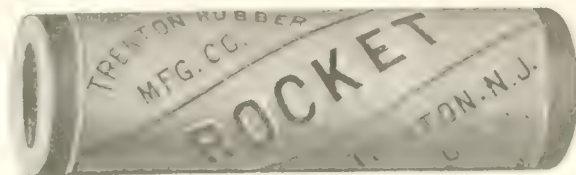
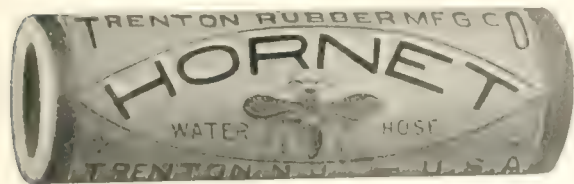
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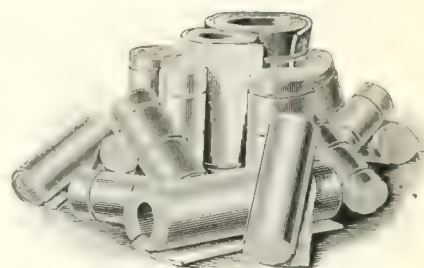
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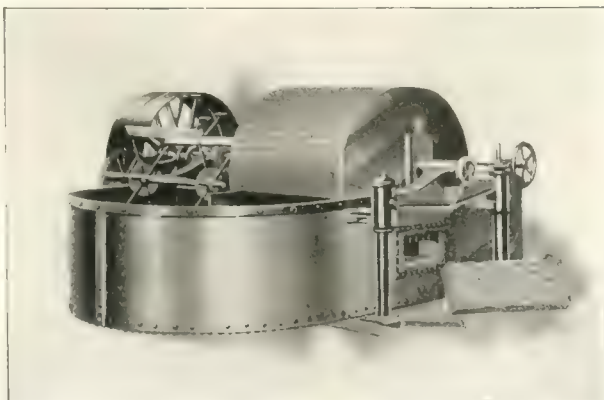
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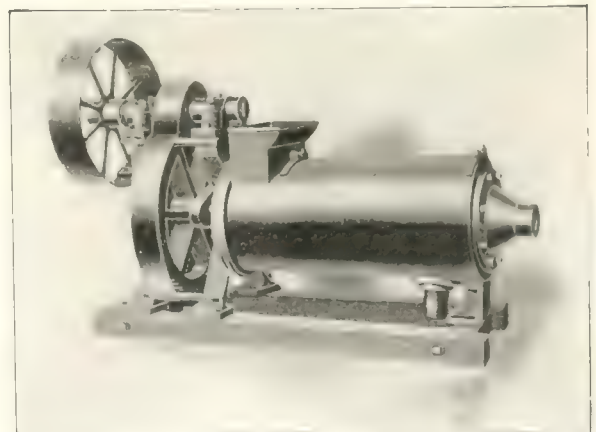
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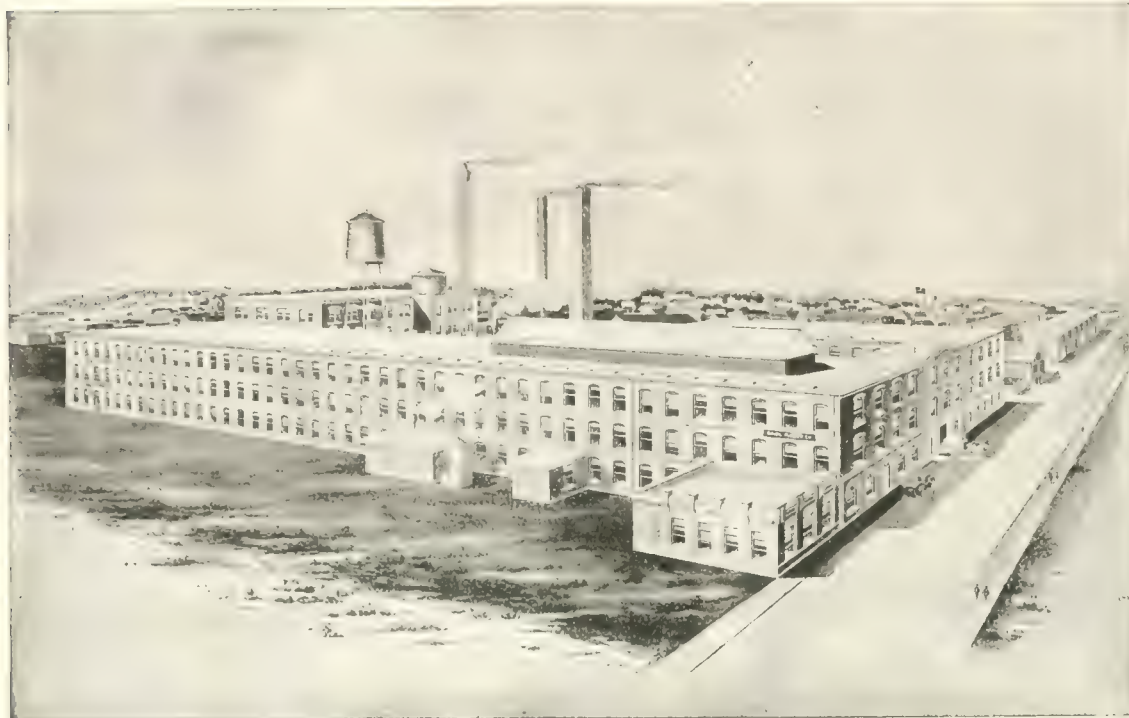
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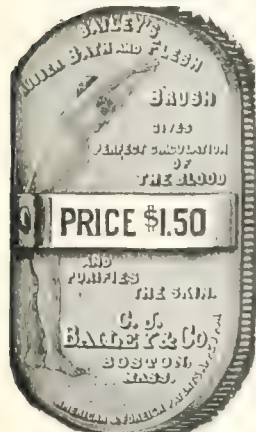
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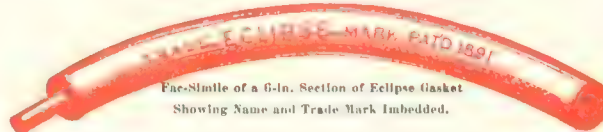


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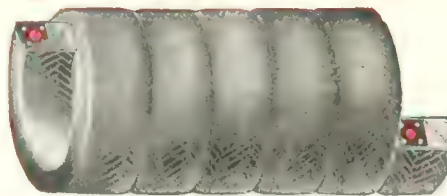
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## TWO KINDS OF RUBBER PLANTING.

THE rubber planting that THE INDIA RUBBER WORLD has persistently sought to promote, for the past fifteen years, is the planting of rubber trees under proper conditions, with a view to the commercial production of rubber. Such planting seems bound to extend, for a long time to come, with ample returns for those who pursue the business intelligently. But this does not apply to the planting of rubber on paper—primarily for the benefit of promoters—a business which this Journal has sought to discourage quite as earnestly as it has tried to promote honest cultural propositions.

Just how much such fiascos as that of the Ubero companies, reported elsewhere in this paper, will damage legitimate business none can tell, but that the exposé is injuring rubber planting as a whole, particularly in Mexico, cannot be doubted. Were it not for the incontestable evidence in the Far East that cultivated rubber is a most profitable crop, the outlook to-day would be dark. Not that the grossest mismanagement of any individual concern can permanently injure sound propositions, or prove a bar to progress, but it may handicap those who, under adverse circumstances, are honestly struggling toward success. There is but one thing for the rubber planter in the southern countries to do, and that is to produce rubber and get it out in such shape and with such records of cost, down to the last penny, that his proposition is proved beyond cavil.

What of the six and seven year old *Castilloas* that are now in existence all through Mexico? There are thousands of them. If the planters know their business they should produce at least a half pound a tree per year, of good clean marketable rubber. Where is it? The planters owe it to the public to make prompt answer—and the best is to give it in the form of rubber.

## RUBBER CLUBS AND ASSOCIATIONS.

ALMOST from the beginning of the rubber industry there have been business associations in it, for one purpose or another, but chiefly for the regulation of prices. While the Goodyear patents were in force and the various manufacturing companies were licensees, price regulation was an exceedingly easy thing. Then too, shortly after the expiration of the patents it was not difficult to get together somewhat along former lines. In time, however, when competition became severe, when new concerns were crowding into the field, it became more difficult.

Nevertheless, the spirit of association continued, and it is only necessary to recall the old Gossamer Association, the Carriage Cloth Association, and indeed, the memory of even the younger manufacturers will bring up gatherings for the prevention of price cutting in almost all of the varied lines that go to make up the rubber industry. It is a sorry statement to make, but nearly every rubber association was short lived, and terminated very suddenly by the withdrawal of certain firms who believed that they played the game fairly while others did not.

At the present time there are in existence several India-



rubber associations. Notably among these are the British and German, and in our own country the Mechanical Rubber Manufacturers' Association, the Rubber Sundries Manufacturers' Association, and the New England Rubber Club. Of these the oldest, most prosperous, and most catholic by far is the last named organization. It has just completed the fifth year of its existence, and a review of its history and what it has accomplished is therefore timely.

To begin with, the Club is wholly and frankly a social organization, admitting all interested in rubber manufacture in New England as resident members, and those equally interested outside of New England, as associate members. With small annual dues, no salaried officers, and a committee organization that for effective work is ideal. The Club now has a membership of over 200, and is without doubt the best known trade club in the United States. This latter fact is due to the public dinners that it gives every year, which have called out some of the most distinguished men in public life, together with an originality in its entertainments that has appealed to the newspapers, and even to the foreign press to such an extent that the organization has been remarkably well advertised. A typical instance of knowledge of its existence on the other side of the water may be cited in the request of the librarian of the British Museum for a copy of a special original menu for addition to the collection of gastronomic literature gathered in that institution.

The value of the New England Rubber Club has lain chiefly in the fact that it has brought the whole New England trade closely together under circumstances where commercial differences were perforce laid aside and business rivals became for the moment, at least, friends. With its record of five successful years behind it and its ambitions for even greater usefulness in future, the Club may indeed be proud of the respect with which the trade regards it and may well believe itself a necessary and permanent organization.

#### RUBBER AND COUNTERFEIT MONEY.

**L**IGHT is dawning on another mystery. We have wondered what became of the enormous outturn of products of "rabbit weed," under the operation of the numerous million dollar companies in Colorado. No rubber manufacturer has been able to supply any information upon the subject. But in a booklet issued by one of the big Colorado "rubber companies" to interest investors we read:

*Fourth.* The pulp left over after the rubber is extracted makes the finest kind of bank note paper, owing to the fact that it still contains enough rubber to give it the required strength and durability. This being the case it will naturally make another source of revenue to the company.

We seriously doubt if the United States government buys "rabbit weed" pulp for making bank notes. Hence a dark suspicion already breathed in these pages may yet prove well founded. We wrote in our issue of last January (page 126):

In response to many inquiries received by THE INDIA RUBBER WORLD as to the product of the plant above referred to ["rabbit weed"], it may be said here that the specimen photographed for the accompanying illustration would appear to be equally fitted to yield rubber or gooseberry wine or counterfeit money.

The closing expression in the above paragraph has been ridiculed in letters received at this office, but ridicule is not always argument. The attention of the treasury secret service is herewith invited to the fact that some of these ostensible makers of counterfeit rubber in Colorado may be in reality turning out counterfeit bank notes.

#### A CONFUSION OF NAMES.

**T**HE *Tropical News* (Boston) prints the following item in its March issue:

Hacienda "La Esperanza," Tierra Blanca, Vera Cruz, Mexico.—Private estate George C. Pearson, Editor INDIA RUBBER WORLD. Had in June, 1902, 50,000 rubber trees four years old, 100,000 ditto three years old; 200,000, two years old. Had tapped older trees, experimentally, with satisfactory results.

Lest the error contained in the foregoing be regarded as the truth, the Editor of THE INDIA RUBBER WORLD is constrained to state that he owns no private estate in Mexico, and that he is not George C. Pearson—the Editor of *The Tropical News* having confused two not altogether similar names.

#### NEW TRADE PUBLICATIONS.

**E**UREKA FIRE HOSE CO. (New York) have issued a General Catalogue of Fire Hose and Supplies for railways, steamships, wharfs, factories, hotels, public institutions, etc., which brings up to date the list of their products, which is constantly becoming more extensive in view of the increasing demand for hose for special situations apart from fire department use. This catalogue has been issued in the "loose leaf form," such as has been adopted by the Southern Supply and Machinery Dealers' Association. The company request mention of the fact that copies of this catalogue are obtainable at their principal office in New York, or at any of their branch offices. [7"×8½". 40 leaves.]

THE B. F. GOODRICH CO. (Akron, Ohio) have issued "The Goodrich Handbook of Lawn Tennis for 1905," which embraces, in addition to rules for playing, which are rendered more practical by a number of illustrations of players in position, a record of championship games in United States. The book also describes the new "Goodrich" tennis ball. [4½"×6½". 104 pages.]

GEORGE BORGFELDT & CO. (New York), who include a variety of rubber goods among the lines which they import, issue a readable monthly publication, intended to interest buyers for the retail trade, under the title *Suggestions*, the April number of which is attractive in appearance and interesting as reading matter, though this number is not devoted to rubber goods. [5½"×7¼". 16 pages.]

#### ALSO RECEIVED.

SPRAGUE Electric Co., New York.=Flexible Steel-Armored Hose. 8 pages.

The Joseph Dixon Crucible Co., Jersey City, New Jersey.=Pencil Geography, Designed for Boys and Girls of All Ages.

The Whitman & Barnes Manufacturing Co., Chicago.=The "W. & B." Rubber Horse Shoe. 4 pages.

Flemish Art Co., No 45 West Twenty-first street, New York.=Illustrated Catalogue No. 3. Pyrographic Novelties [including rubber bulbs and tubing]. 44 pages.

Firestone Tire and Rubber Co. (Akron, Ohio).=[Booklet describing the varied uses of the Firestone "side wire" tire in St. Louis during the Louisiana Purchase Exposition, at which a Gold Medal was awarded for it.] 16 pages.

The Ohio Rubber Co., Cleveland, Ohio.=The Cable Trace. 8 pages.

## ANNUAL MEETING OF THE NEW ENGLAND RUBBER CLUB.

THE annual meeting of the New England Rubber Club, adjourned from Monday, April 17, was held in the Assembly room of the American House (Boston) on the evening of April 25. There were about 100 present, when Treasurer George P. Whitmore called the meeting to order and proposed that the honorary vice president, Augustus O. Bourn, take the chair, as both the president and vice president were absent. The first business was the reading of the secretary's report by the assistant secretary, E. E. Wadbrook.

## THE SECRETARY'S REPORT.

MR. PRESIDENT AND MEMBERS OF THE NEW ENGLAND RUBBER CLUB: The last annual meeting of our Club was held at the quarters of the Massachusetts Automobile Club, Boylston street, Boston, when the officers who have served you during the past year were unanimously elected. Following the election of officers was a Smoke Talk, illustrated by stereopticon views, the whole being descriptive of a journey to the great planting districts in Ceylon and the Federated Malay States.

Our next gathering was at the Country Club, Brookline, the occasion being our regular Midsummer Outing. This function was in every way on a par with those that had preceded it, and may well be called one of our most successful outings.

In the fall the Club treasury being low and the Editor of THE INDIA RUBBER WORLD having a story of experiences in Panama weighing heavily on his mind, he was invited to appear before the Club at the assembly room in the American House and ease himself of his accumulation of experiences and adventures. This also took the form of a Smoke Talk, and as the cigars were particularly good, the audience appeared to enjoy the entertainment.

The Midwinter Dinner, occurring in February and held at Young's Hotel, was one of the most successful that the Club has ever given. The guests of honor were Ex-Secretary John D. Long and Colonel Samuel P. Colt, and the addresses of these distinguished gentlemen, together with those of other speakers, will long be remembered by the largest gathering, with one exception, that our Club has ever brought out.

At our last annual meeting we felicitated ourselves on our membership of 179. We have new cause for congratulation in that we have now 210 members.

During the year past the Club has suffered untold loss through the deaths of Hon. E. S. Converse, George A. Alden, Dr. Carl Otto Weber, and Mr. A. H. Yeomans, men whose places can never be filled, but whose names on the roll of our organization are in themselves a precious legacy.

Two most important suggestions regarding the future usefulness of the Club developed during our last midwinter dinner, and it is to be hoped that during the present year something tangible may come of them. The first of these, from the lips of Ex-Secretary Long, was to the effect that some suitable memorial to Charles Goodyear should be undertaken by just such an organization as the New England Rubber Club. The other, from our absent president, the Hon. L. D. Apsley, that the New England Rubber Club appoint a committee of five and invite each of the other forty trade organizations in Massachusetts to do the same, forming a committee of 200 to come together, discuss important questions and to report back for unanimous action on the part of the clubs that they represent.

As this meeting comes on the fifth anniversary of the existence of the Club, we may well congratulate ourselves on its progress and permanence. That the Club is a great success goes without saying. That it has brought together the whole New England trade, notably promoted a spirit of friendliness, and incidentally spent some \$9000 for which double that value has been received, is a not unworthy record, nor is it too much to hope that the next five years of the life of the Society will show an equal if not greater measure of growth and usefulness.

HENRY C. PEARSON, Secretary.

The report of the treasurer followed after which, J. Frank Dunbar on behalf of the Auditing committee, certified to the correctness of the report.

## THE TREASURER'S REPORT.

RECEIPTS.	
Bank Balance April 18, 1904	\$ 704.04
From Members for Initiation	\$ 145.00
From Members for Dues	966.66
From Members for Dinners	1,021.47
Total	\$2,837.17
DISBURSEMENTS.	
Dinners, etc.	\$1,433.29
Flowers	113.55
Music and Entertainment	298.38
Prizes, Sporting Goods, etc.	31.10
Printing, Postage, etc.	275.54
Refund Members on Dinner Tickets	12.00
Bank Balance and Cash on Hand April 18, 1905.	673.31
Total	\$2,837.17

GEORGE P. WHITMORE.

Treasurer

The next business was the election of officers. The chairman, in bringing this business to the attention of the Club, stated that the present officers had been asked to serve for another year, and all had signified their willingness to do so with the exception of the Hon. L. D. Apsley, who declined reelection because of the constantly increasing pressure of his business. The following ticket was then unanimously elected:

## OFFICERS.

President—JOHN H. FLINT.

Vice President—ARTHUR W. SEEDMAN.

Treasurer—GEORGE P. WHITMORE.

Secretary—HENRY C. PEARSON.

Assistant Secretary—EUSTON E. WADBROOK.

Honorary Vice Presidents—Augustus O. Bourn, Robert D. Evans, James Bennett Forsyth, George H. Hood, Henry C. Morse, L. Dewait Apsley.

Directors—Costello C. Converse, Joseph Davol, A. M. Paul, E. S. Williams, Arthur W. Clapp, Frank L. Locke.

The Smoke Talk which followed was a further story of tropical travel by the Editor of THE INDIA RUBBER WORLD, the subject being a trip to Columbia, Costa Rica, and Nicaragua. The speaker had on that journey as traveling companions, Mr. C. H. Arnold and Mr. A. F. Townsend, both well known in the rubber trade. As the story will be told in detail, with many illustrations, in later issues of THE INDIA RUBBER WORLD, it is not necessary here to do more than say its relation proved it to be most interesting, and incidentally that the speaker's companions were of just the sort to make a journey to the tropics exceedingly entertaining and enjoyable.

After the conclusion of the lecture a colation was served and the members and guests spent an hour in an informal social. A meeting of the Executive Committee was held directly after the Smoke Talk at which the following committees were appointed:

Dinner—Frederick H. Jones (chairman), Ira F. Burnham, William H. Keyes, G. E. B. Putnam, Eugene H. Clapp.

Entertainment—R. L. Rice (chairman), E. E. Fay, J. Frank Dunbar, George H. Mayo, W. M. Farwell.

Auditing—George P. Eustis, J. Frank Dunbar.

Sports—W. E. Barker (chairman), Fred T. Ryder, R. L. Chipman, F. D. Balderston, James H. Learned.

Resolutions—The officers of the Club, *ex officio*.

The secretary, treasurer, and assistant secretary, are *ex officio* members of the Dinner, Entertainment, and Sports committees.



## THE RUBBER SUNDRIES MEN DINE.

VERY select and exclusive is the Rubber Sundries Manufacturers' Association, and in the past no one not a member has been bidden to its annual banquets. This year, however, an exception was made, and Colonel Samuel P. Colt and Henry C. Pearson were invited as guests of honor at the banquet on the evening of April 12, in New York. The former was unable to be present, but the Editor of THE INDIA RUBBER WORLD got there early and staid until the last gun was fired. A business meeting of the Association was held at the Hotel Astor in the afternoon, when the following officers were elected:

*President*—George F. Hodgman, Hodgman Rubber Co., New York.  
*Vice President*—H. E. Raymond, The B. F. Goodrich Co., Akron.  
*Treasurer*—F. H. Jones, Tyer Rubber Co., Boston.  
*Secretary*—E. E. Huber, Eberhard Faber, New York.

At 7 o'clock the company gathered at Delmonico's, and were ushered into the "red room," where the banquet was given. One half of the great room was occupied by a magnificent round table, on which covers were laid for forty. This table, its center a mass of primroses, shot through with tiny electric lights, its circumference fringed with bouquets of roses, was a veritable artistic triumph. The menu, bound in a dainty white fabric, decorated by hand with narcissis and roses, in each case was lettered in gold with the name of the guest before whom it was placed.

After the coffee the newly elected president, Mr. George F. Hodgman, rose and paid a graceful tribute to Mr. Joseph Davol, the former incumbent of the office, and then introduced Mr. H. E. Raymond as toastmaster for the evening. The latter took hold of the business in hand, in characteristic breezy fashion, by introducing the Editor of THE INDIA RUBBER WORLD, as a rubber man whose hand stretched around the world in search of rubber.

The speaker gave twenty minutes to a review of matters in which the Sundries men are vitally interested, and was followed by Messrs. H. H. Shepard (the for-

session of the tiny stage at the other end of the room and showed a marvelous series of coin and card tricks. He was followed by an artist in crayons who did wonders with a few sweeping strokes. One of his hits was a ten second sketch of the late Hon. E. S. Converse. He was also a rare imitator and ventriloquist, and free from the cheap stage tricks that that sort of artist usually effects. Then came a young Irish-American who told a series of "Hogan" stories in dialect that brought down the house.

The trend of thought of those present was trade unity, with an occasional reference to the high price of crude rubber, well illustrated by the accompanying illustration that adorned the dainty box in which the ice cream was served.

Those present at the banquet were:

G. F. Hodgman.	Herbert V. Hardman.	F. A. Hodgman.
H. C. Pearson.	F. C. H. Hardman.	A. W. Warren.
R. H. Pease.	James A. Murrey.	H. C. Burton.
S. T. Hodgman.	E. E. Menges.	Weldon Roberts.
R. H. Pease, Jr.	R. A. Kincaid.	E. E. Huber.
J. A. Ackerman.	W. D. Shattuck.	E. Faber.
J. H. C. Richmond.	W. G. Brewer.	J. H. Flint.
W. L. Pitcher.	F. L. Williams.	W. N. Lockwood.
James Hardman, Jr.	F. H. Jones.	G. B. Hodgman.
	J. Harry Hardman.	H. D. Archer.
	H. H. Shepard.	F. W. Stewart.
	R. G. Lockwood.	H. E. Raymond.
	C. Van Vliet.	J. M. Kelley.

Edgar Park.



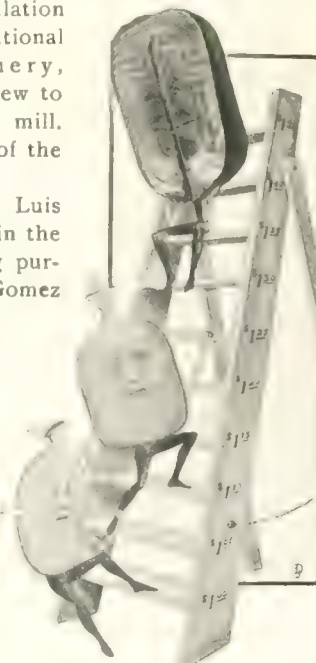
GEORGE F. HODGMAN.

## EXPLOITATION OF GUAYULE.

JUAN FRITZ, manager of the factory of the Compañia Explotadora de Caucho Mexicano at Jimulco (Coahuila), Mexico, is reported to have obtained no fewer than 30 Mexican patents covering processes for the extraction of rubber from Guayule. The Monterey News mentions that the Jimulco mill has been in operation for over a year, and at present is producing two tons of rubber per day, employing 150 men. Mention is made of the installation of additional machinery, with a view to

doubling the capacity of the mill. Mr. Fritz is writing a history of the Guayule interest.

Oton Katterfeldt, of San Luis Potosi, Mexico, is mentioned in the Torreon Enterprise as having purchased and paid for land in Gomez Palacio, in the state of Durango, on which he will build, at his own expense, a factory for obtaining rubber from the Guayule plant. It is stated that machinery for the works has been bought, and that Mr. Katterfeldt owns ample capital for carrying out his plans. Gomez Palacio is across the border line from Torreon, in the state of Coahuila, and has become an important town.



FROM THE COVER OF THE ICE CREAM BOXES AT THE RUBBER MEN'S DINNER.

## MENU

Canapes Moscovitz

Soup

Green Turtle

Side Dishes

Leadishes Olives Caviar

Fish

Brook Trout Meunier

Cucumbers Laurette Potatoes

Remove

Saddle of Yearling Lamb Colbert Sauce

Stuffed Tomatoes

Entrees

Terrapin Baltimore

New Asparagus Hollandaise Sauce

Roast

Boned Squab

Lorenzo Salad

Sweets

Moulded Ice Cream

Assorted Cakes Cheese

Pol Roger, '98

mer vice president) Frederick H. Jones, H. C. Burton, E. E. Menges, and W. H. Lockwood.

The speeches were excellent, were enlivened by good stories, and had an excellent setting in the bright introductions and witty comments of the toastmaster. So good indeed were some of the things said that the unwritten rule of the Association ought really to be broken and the trade as a whole allowed to read, if not to listen, to them.

The speaking being over, a good looking young man took pos-

## THE SOUTH AMERICAN "CAUCHO" TREE IDENTIFIED.

By Ernst Ule.\*

THE rubber tree *Castilloa Ulei* (Warburg) belongs to the family of the *Morææ* and is distinctly different from the West Indian species, *Castilloa elastica* (Cervantes).

The chief difference consists in the form of the fruits, which are globular and not flattened. The trees bear distinct male and female blossoms, the crowns of which spread out to a considerable size. The fruits ripen about Christmas time, and are edible. The *Castilloa* trees may be distinguished from a distance by their roots, which spread near the surface of the soil, and are often exposed to the air. In Germany we call such roots of forest trees "rope" roots. In the Amazon district the *Castilloa Ulei* is generally called "Cauchó," and grows in those parts of the forests which are free from inundation, in the same districts where the *Hevea Brasiliensis* is found. Very peculiar methods are used in the gathering of rubber from the *Castilloa Ulei*.

The rational exploitation of the trees would hardly be profitable in the districts where the Pará rubber is gathered, and in the whole territory of Amazonas, therefore, the gathering is done without regard to the welfare of the trees. The *Castilloa* trees are mostly found in the interior of the forests, in the dryer places, where vegetation is less dense.

The gathering of this rubber often requires long and difficult journeys into the interior, necessitating the transportation of food, while, on the return journey, heavy loads of rubber must be carried. As the Brazilians show little liking for such an adventurous life, the gathering of the product of the Cauchó has generally been left to the Peruvians, numbers of whom come to Brazil for this purpose. These Peruvians, as descendants from the Indians intermixed with Spanish immigrants, are much more accustomed to life in the wilds, and to the carrying of loads. The *Castilloa* trees in Peru have mostly been destroyed, while in the territory of the more western streams flowing into the Amazon in Brazil—the Javary and Juruá rivers—their number has greatly decreased. Not many years have passed since the Juruá districts had the largest exports of the product of Cauchó. At the present time most of the *Castilloa* rubber is gathered in the territory of the Purús and Madeira rivers.

Many Peruvians from the eastern parts of their country make their way into Brazil, and many of their home villages have at times no male population, their women rarely accompanying the men on their journeys. These Peruvians, known as *Caucheros*, are under the leadership of a contractor, who enters into an agreement with the proprietors of the rubber districts and pays them a tax.

On the outward journey Brazilian river steamers are made use

of, unless an opportunity offers for embarking on Peruvian vessels, which are compelled to sail under the Brazilian flag. Peruvian settlements are scattered along the banks of the streams, and often serve the Cauchó gatherers as a point of departure. The most necessary utensils and provisions must be taken along on the journeys through the woods. Chopping knives (*terçados*), axes, guns, ammunition, hammocks, mosquito netting, some clothing, mandioca (tapioca) flour, and dried fish make up the most indispensable articles. In regard to food, the requirements of the Peruvian are very simple, but, being a good hunter, he is seldom long without fresh game of some kind or other.

When the *Caucheros*, who always journey in small parties, have reached a district where *Castilloa* trees are found, they rest awhile from the fatigues of the journey, before commencing the chopping down of the trees. Some care is taken to have the trees fall in favorable direction. As soon as the tree has fallen under the reiterated blows of the axes, the rubber milk is gathered at once. A number of incisions are first made in the branches and the tree top, to prevent the latex from flowing into the mass of twigs, and when this is accomplished the slits are made in the trunk.

The latex is now allowed to flow into receptacles of different kinds, such as calabashes or tin vessels, which are usually emptied into flat holes in the ground, lined with leaves. The sap of an *Ipomoea*, known as "batata rana," to which a little soap is usually added, rapidly causes the milk to coagulate. The rubber thus prepared prevents itself as a broad, flat mass, of a dirty black color. This product is known as *planchas* (sheets) *de Cauchó*. A new method has lately come into use by which the latex is allowed to flow and to coagulate by contact

with the air. Strips of rubber are thus produced, which are rolled up and are sold at a higher price under the name of *serenamy de Cauchó*.

As a single tree will sometimes furnish as much as 30 kilograms [=66 pounds] of Cauchó, the work at the present time is profitable, although the price is low. However, many days may elapse before the gatherer finds other trees, and the transportation of the product is, moreover, a very difficult and fatiguing task. The Brazilian *seringueiros* themselves seldom gather the rubber of the *Castilloa*, and attempts to rationally maintain the trees by tapping them have been rare. It is said that the *Castilloa* trees will not bear tapping, and that the trunks decay soon after the operation.

Although the Brazilians complain that in the districts visited by the Peruvians, not only are the Cauchó trees destroyed, but likewise the game and the wild Indians, they allow them to continue their raids for the sake of their own personal profit.

In regard to the rubber gathered from the *Castilloa Ulei* an investigation would have to be made in order to determine



CASTILLOA ULEI (WARBURG).

[F= Branch, with fruit. G= Fruit. H= Section of fruit. One-fourth natural size.]

\* Extracts from "Kautschukgewinnung und Kautschukhandel am Amazonas," published as a supplement to *Der Tropenpflanzer* (Berlin, January, 1905).



whether the product is superior or inferior in quality, as compared with that of the *Castilloa elastica*.

#### EDITORIAL NOTE.

IT is of no small interest that we can now point to a definite designation of the tree yielding the distinctive variety of South American rubber known commercially as "Caucho," which is the Spanish word for Caoutchouc. The tree was described as a species of *Castilloa* in THE INDIA RUBBER WORLD [October 1, 1899—page 4], by Dr. J. Huber, of the Pará Museum, who was inclined, though in the absence of complete materials for identification, to regard it as the *Castilloa elastica*, the rubber yielding species of Mexico and Central America. From a detailed popular description of the tree, however, contributed by Lyonel Garnier to THE INDIA RUBBER WORLD [June 1, 1902—page 281], there appeared reason to doubt the identity of the Amazonian tree with the Central American species. It has remained for the identification to be made by Dr. Otto Warburg, of the royal botanical gardens and museums of Berlin, and editor of *Der Tropenpflanzer*, as a result of collections made by Ernst Ule, whose extensive explorations in the South American rubber zone have been referred to already in these pages. The "Caucho" tree is now known to be a distinct species, which has been named, in honor of the distinguished observer above mentioned, the *Castilloa Ulei*. Readers who may feel further interested in the subject of Caucho production may find additional details, regarding the *habitat* of the tree and the method of gaining rubber from it, in two articles published hitherto in THE INDIA RUBBER WORLD: "The Peruvian Caucho Tree and its Product," by M. F. Sesselberg [December 10, 1897—page 65], and "Is the Caucho Trade in Peru Declining?" by Fred J. Hessel [May 1, 1899—page 206].

TABLE OF EXPORTS OF CAUCHO AND OTHER GRADES OF RUBBER FROM THE AMAZON FOR SEVENTEEN YEARS (IN KILOGRAMS).

YEARS.	Fine.	Medium.	Coarse.	CAUCHO.	Total.
1888.	5,513,343	1,314,791	3,587,125	1,055,962	15,011,121
1889.	5,771,781	1,800,773	4,078,052	846,832	15,887,507
1890.	9,091,881	1,504,360	4,231,421	964,256	16,392,321
1891.	10,747,241	1,606,683	4,377,311	1,128,450	17,789,495
1892.	10,155,587	2,050,806	4,357,588	1,355,060	18,509,000
1893.	11,131,779	2,029,958	4,781,700	1,187,642	19,130,100
1894.	11,736,623	1,784,414	4,077,410	1,318,769	19,477,308
1895.	11,736,623	2,090,273	5,117,117	1,636,512	20,769,581
1896.	11,811,881	2,543,625	5,502,578	1,730,412	21,601,874
1897.	12,296,102	2,444,503	5,722,705	2,073,012	22,535,322
1898.	12,111,118	1,994,670	5,781,515	1,964,627	21,961,107
1899.	13,001,452	2,349,808	6,550,723	2,535,426	25,430,009
1900.	13,888,811	2,601,001	7,040,248	2,751,600	26,748,660
1901.	15,000,000	3,482,863	6,877,009	3,963,889	30,299,498
1902.	18,111,435	3,129,768	7,118,590	3,199,377	28,549,780
1903.	16,404,937	2,624,310	7,689,394	4,210,828	31,094,942
1904.	18,000,000	2,624,310	8,000,000	4,443,056	30,644,136

Fine.	21,775,242
Medium.	27,237,199
Coarse.	95,473,488
Caucho.	36,366,610
Total.	351,772,749

In view of the evidence of Dr. Ule, and that of all other competent observers, that the extraction of Caucho invariably involves the destruction of the tree, the preceding statistics of Caucho production indicate how rapidly the Amazonian forests are being robbed of this species. The number of Caucho trees originally must have been very great, and no doubt an enormous number remain yet to be cut down, as indicated by the fact that the total output shows as yet no tendency to decline. There are available few detailed figures regarding the yearly output of Caucho from definite districts. Some figures in hand, how-

ever, in regard to the river Juruá, for five recent crop years, illustrate the tendency to decline in the districts where Caucho is extensively produced. The table shows the yearly production of rubber and Caucho in tons:

	1899.	1900.	1901.	1902.	1903.
Rubber.	2505	2569	3623	3605	3695
Caucho.	2093	2274	1763	1118	842
Total.	4598	5443	5406	4723	4537

It will be noted that whereas the Caucho output has declined steadily the production of fine rubber in the same district has grown, due to the fact that this rubber is obtained by tapping the same trees regularly, and that constant additions are made to the number of trees exploited.

A graphic illustration of the same tendency appeared in THE INDIA RUBBER WORLD of October 1, 1901 [page 8], in a chart showing the rise and decline of rubber production in Colombia for 46 years, during which period, from a very small beginning, the exports rose to about 7,000,000 pounds, after which there was a speedy decline to less than 1,000,000 pounds, which has since remained about the average yearly product. This rubber while not wholly of the same grade as what is above described as Caucho was practically the same rubber; at any rate the diminishing production was due to the exhaustion of the trees, just as later occurred in the Amazon regions.

#### SOME WANTS OF THE TRADE.

[321] A CORRESPONDENT is seeking "full details as to the manufacture of electric tape—formula for its manufacture, also the working details."

[322] "We are desirous of purchasing stockinet cloth, such as is used in glove stock and sometimes in shoe uppers, and trust that you can advise us as to the parties who manufacture this material."

[323] From Europe: "We should be greatly indebted to you, if you could give us the name and address of a first class mill architect who has extensive experience in designing rubber shoe factories."

[324] "I would thank you to favor me with the names and addresses of the manufacturer of special machines used in extracting or washing out the rubber from a shrub or root that grows in Mexico"—evidently referring to Guayule.

[325] "Will you kindly inform us if you know or ever have known of an American incorporation called the United States Gutta Percha Co., and where they are located?"

[326] "We should be pleased to have you recommend a party to us who has an efficient process for reclaiming rubber and who desires to sell such process."

[327] "We are looking for the address of some reliable manufacturers of massage novelties, such as cupping bulbs, massage balls, and the like."

[328] "We have an inquiry for conveyor belts—two ply center, four ply ends. Could you give us any information as to who makes this belt?"

[329] From an important hose manufacturing firm: "Can you give us the names of any parties who manufacture machines for winding hose with wire?"

A RUBBER KING.—A New Orleans newspaper mentions as soon to become a resident of that city Señor Don José Aramburu, who recently has sold to North American capitalists a Nicaraguan gold mining property—the La Luz and Los Angeles Mining Co.—and who "was for 16 years known as the rubber king of Nicaragua."

## JOTTINGS BY AN AMERICAN IN EUROPE—I.

TO THE EDITOR OF THE INDIA RUBBER WORLD: When starting off on this European tramp I did not intend to be impressed with anything I saw. I have been told so many times that I am apt to portray much that I see with too glowing colors, that I had made up my mind to be very conservative in what I had to say about foreign lands, and what was done there, especially in that line in which you, Mr. Editor, and your readers are most interested. Well, it is said that Hades is paved with good intentions, and I am very much afraid that if some of the latest pavement put down in that benighted (?) region should be inspected, it would be found to bear my initials or trademark, for do what I will I must admit that there are other ways, other means, other methods, just as good people, just as nice cities, just as pushing energetic men, under one sky as under another, and that while their systems would not suit us, neither would ours suit them.

I cannot confine myself to a mere technical article, but I must give you just a hint of what so forcibly strikes me, in a general way, as I roam from country to country. I find that we Americans are an extravagant people. Some people here would get rich on what we waste, and that is true in manufacturing as well as in living. All Americans have not succeeded as well as have the pork packers, who are said to save even the squeal of the pigs they stick. Taking breakfast the other day with some friends in a private house I noticed that the elderly ladies did not take sugar in their coffee in the morning. I inquired the reason why, and I was told sugar costs money, and no child of their day was allowed milk and sugar at the same time; milk for breakfast, sugar without milk for the *demitasse* at noon. I find that maxim carried out on the continent to a fine degree.

In all factories the chemist plays an important part, not only to test the quality of all that is used, but to find a place and a use for those things which appear to and, as a matter of fact, do go to waste until the chemist has discovered a commercial value in that which had been thrown away. This is especially true in Germany, and it is to this care and research that the Germans owe the proud place they now occupy as a manufacturing and a producing nation—one that has to be reckoned with all the time. I do not know that I am doing anything now to interest my friends, who are all your readers, but I am possibly carried away with the prospective pleasure of seeing myself in print, as some others from Boston have been, and so am writing for space.

But let us strike a few rubber people; the price of the crude Pará seems to be paralyzing them all, and the worst of it is that the Americans are over here taking in all that can be bought. What seems to be a peculiar condition is the price reached by "Ceylon"; it soars above Pará and is said to be more economical even at a higher price than the finest Pará.

Then comes the query "What are you Americans doing? Why do you not go to the Philippines, where climate and soil are all so similar to that of Ceylon, and get your rubber plantations started?" It is true the capital invested must remain idle for eight years, but after that the first crop clears up the first cost, and then !!!

I have notes about some rubber factories that need touching up a little, and so I will let those go for a future letter, but I must at this time say one word about some old friends of mine, the Harburg and Vienna India-rubber Works (Vereinigte Gummiwaaren-Fabriken, Harburg-Wien), at Harburg on the

Elbe. Some years ago I gave you a sketch of this great industry [See THE INDIA RUBBER WORLD, June 10, 1895], and as I do not care to repeat myself, I shall not attempt a description of their works. I simply want to say that during the last few years many improvements and changes have taken place. With a courtesy rare, as a rule, to foreigners, I was shown through this tremendous plant by the two managing directors, Messrs. Louis Hoff and Franz Stingl. An immense four story building is devoted to tires alone; another one to toys and balls; here I was pleased to see in successful operation two American machines making balls, old friends of mine in fact.

It is admitted, I believe, that the German tennis ball is *the* ball for the skilled players; at any rate this renowned ball is made here at the rate of 600 dozen per day, and before this can reach your readers a novelty in the way of a knitted covered ball will have been placed on sale in the United States. An up to date shoe factory is turning out 18,000 pairs of shoes a day, and refusing orders at that. The production must be greatly increased, and to do so the foundations for an entire new plant are going in now. Here, too, we are pleased to note another American machine doing its full share to keep the American name well to the front, the Wellman sole cutting machine. I will not attempt to give you many more details, but here is made all that can be made of rubber excepting hard rubber goods.

I am afraid that my friend Hoff may criticize what I am now going to say, but when he sees it it will be too late, and I believe in giving free expression to my opinions. I have rarely seen a man who has the energy and push of this man; I can compare him to nothing else but to a general commanding a large army. He directs his force with a master hand, and the results are seen not only in the good dividends paid, and in the increased business, but by the gradual renovating of the entire plant and its increase in size as well, and all this out of its earnings.

A few years ago, this company acquired, caught, or was inoculated with the fashionable disease of the day, a first class strike. This was not a mild case, but a true one, for even foremen and engineers went out. The causes of the strike I am not discussing, only the effects. On a Saturday 1000 hands went out; on Sunday the chief engineer called on Mr. Hoff and told him that all the engineers, firemen, and machinists had joined the strikers, and so no machinery would be started Monday. A call went out at 4 o'clock Monday morning; directors, managers, heads of departments, clerks, etc., had been turned into engineers and stokers, and at the usual hour the whistles blew, the gates were opened, and the engines were all started, the late Mr. Carl Maret (Mr. Stingl's predecessor) handling the main engine himself. Neither a man or woman came in, but the streets were crowded with jeering operatives. On Monday notices were sent out that all those who did not report for work within 24 hours would be discharged. The result of this was that 400 of the old operatives responded and a start was made. In the mean time agents had been gathering men from distant places, and these began to come in.

Here a new difficulty presented itself; no one would feed any of these "black hearts". "Let us see," says the general. In 36 hours a brick building capable of housing, sleeping, and feeding 600 people was completed. The builder, whom I met to-day, had orders to do this regardless of cost, and 800 carpenters



ters, masons, and ironworkers did the job in the stated time. No concessions were made, because none were needed, and it will be many a day before another strike will bother either Mr. Hoff or Mr. Stingl.

The price of rubber gives our rubber men not only something to talk about, but it was a factor in the creation of an entirely new industry, and as its birth was really due to rubber and rubber people, you will find it a place in your esteemed journal. It is a new product called Galalith, or as the labels on the goods say, "Made of Milk." When rubber began to soar and rubber workers began to agitate, our friend Hoff began to look about for an outlet for capital, one that would not be subject, for a while at least, to the conditions existing in the rubber trade. This new compound was found and a company organized, known as the Internationale Galalith-Gesellschaft, Hoff & Co.

Here is a material that takes the place of hard rubber; it is incombustible, a perfect insulator, and can be produced in colors of all shades and descriptions. It imitates tortoise shell, both clear and mottled, amber, marble; in fact, anything, even to the various celluloid things. Inside the walls of Harburg and Vienna works at Harburg, this new company, composed principally of the H. and V. people, but independent from the rubber works, have put up a model modern fireproof five story building, 150×60 feet. It is full of interesting machinery, and here are made a series of articles that fill one with surprise. A large part of the business is supplying sheets for manufacturers of many things, especially combs. It is not rubber, but it takes its place to perfection. Floors, walls, table tops to imitate marble, tiling, combs of all kinds, varieties, and colors, amber cigar and cigarette holders, checkers, chessmen, cane, umbrella, and parasol handles; in fact, everything now made of hard rubber or celluloid, and many things never dreamed of as being possible in either of the two last materials, for it is incombustible and odorless. It is a new creation, a new industry, a brilliant victory of brains over matter. I mention this for the reasons given above and because it is worked by rubber people to take the place, in a large measure, of hard rubber, and the tons now turned out prove that the new material has come to stay.

The rubber business is booming here even with rubber quoted at a price never before reached. The Harburg and Vienna tire shops are run night and day. The emergency barracks spoken of above are now run as a restaurant and *bier-lokale* by the company. The men and women can obtain here good food and good beer at cost, or can use the dining halls to eat the food brought from home. But I am afraid I am becoming garrulous, and so will say *au revoir*. A. M. STICKNEY.

Harburg, Germany, March 1, 1905.

**GOLF AND TENNIS.**—The usually well informed *Sporting Goods Dealer* (St. Louis) says: "Golf will be played as never before in America, despite the murmurings of discontent at what many players consider exorbitant prices for balls. There has been talk of returning to the old gutta balls in the association games, as a form of protest most likely to secure the manufacturers' attention; but even if such action would meet with approval from the competitors—which may be doubted—there is no adducible evidence that the makers of rubber cored balls are harvesting an undue profit from their business. In golf accessories many new lines and specialties are shown this season, some of them possessing meritorious features that will command recognition. Lawn tennis goods will be in unusually brisk demand later on, providing favorable weather conditions obtain."

## RUBBER FROM THE ROCKY MOUNTAINS.

IT is important (if true) to learn from our esteemed contemporary the *Reveille*, of Butte, Montana, of March 31, that the Rocky mountain region of the United States will in two years be producing enough rubber to supply the demand of the entire nation. It appears from the *Reveille* that Venezuela, which is the real home of the rubber tree, has been less active of late in yielding rubber, although more gold has been exported from the United States to pay for rubber than for any other commodity. Within a few months past thousands of tons of a shrub abundant in the western United States were gathered, on account of having been found to contain rubber, and, to continue to quote from the *Reveille*, "the finished rubber has been thoroughly tested and is serviceable in every line of manufacture"—from which we assume that the steel manufacture and textile and leather and woodenware trades are to be included. The same newspaper adds that "Eastern capitalists are amazed by what has been shown them, and many are ready to invest large sums" in the new opportunity to get rich which has thus been opened to them.

The Kalamazoo (Michigan) *Telegraph* mentions a discovery, "almost too good to be true," of pure rubber, to be obtained without limit in Colorado, by the use of "hot water and maceration," after which "the product comes out in chunks like sausage." The *Telegraph* asserts: "Eastern rubber manufacturers have contracted for the entire output at prices equal to that paid for Pará rubber, and the demand cannot to even a small degree be supplied."

We next get nearer to the source of the new product. The Alamosa (Colorado) *Courier* announces that the neighboring town of Saguache is really to have a rubber factory, "Manager Woodbury, of the Western Rubber Co., of Akron, Ohio," having written to parties there to commence digging up the rubber plant at once, as his company will accept the roots of the plant at \$40 per ton. "Robert Allen, who has tried digging the plant, says that he can dig 300 pounds per day." The digging will begin next week, on Middle creek.

The Salida (Colorado) *Record* says: "To be the pioneers along any line is to undergo hardship; but with success comes reward and often honor"—which truism is suggested by the organization in Salida of the Rocky Mountain Crude Rubber and Development Co. This concern appears to have been organized on March 27, with \$300,000 capital in \$1 shares, of which enough has been paid in, according to the Salida *Mail*, "to build a perfect machine, which R. D. Maine has invented and patented."

THE INDIA RUBBER WORLD has been favored with a prospectus of the Rocky Mountain company, stating:

*First.*—That the plants to be utilized yield from 7 to 20 per cent. of their weight in rubber.

*Second.*—That the pulp left over after the rubber is extracted makes the finest kind of bank note paper.

*Third.*—That the tops of the plant can be converted into hard rubber.

The authors of this pamphlet evidently forgot to add:

*Fourth.*—That the air above the plant represents about all that the investors of the company may hope to realize for their money.

The Rocky Mountain Crude Rubber and Development Co. are incorporated under the laws of Colorado. The officers are: F. E. Hodding, "who has ridden these mountains in pursuit of his business for years," president; W. W. Roller, vice president; O. J. Kennedy, secretary; H. G. Hodding, treasurer; A. R. Miller, counsel. Mr. Maine, inventor of the machine, is also a director, and the name of P. P. Maine is another.

## THE INDIA-RUBBER TRADE IN GREAT BRITAIN.

*By Our Regular Correspondent.*

IT seems pretty certain that a revival in this branch is imminent, and this not as regards the macintosh for the million, which used to be the mainstay of the trade, but with respect to the needs of the motorist, who seems to have come to the conclusion that as the ordinary shower proof

THE  
TEXTILE  
BRANCH.

goods are inefficient, he may as well have the non porous rubber article instead of the heavier and more expensive leather garment which has during recent years been so much in evidence. The man who gives four figures for his car is not likely to haggle over a few shillings more or less for his coat, and the probability is that we shall see a revival of the more durable higher priced macintosh coats which were to be seen more commonly twenty years ago than in the last decade. This forecast is certainly the earnest desire of the manufacturers, who as a body do not care for the cheap trade which the stress of competition forced upon them. Of late years such firms as are in the waterproofing branch alone have had their rubber machinery idle to a large extent but have kept up their dividends by what is practically a tailoring business in shower proof clothing. It may be mentioned that the Manchester firm of waterproofers B. Cohen has recently been turned into a private limited company with a capital of £65,000. The premises have been enlarged more than once in recent years and the concern seems to have made steady headway. Our Editor's experience of rubber goods garments in the tropics [See THE INDIA RUBBER WORLD for March] is important testimony as to the limitations of such goods, despite the claims of most manufacturers that their products are vulcanized to stand all climates. Trouble is always being experienced where the extremes of heat and cold are met, and it is quite understandable that the better the rubber used and consequently the better the rain resisting qualities, the less is the garment fitted to withstand extremes of temperature. This largely accounts for the fact that though at one time the macintosh trade was very profitable in Holland, it only assumed very small dimensions in Scandinavia. It is possible that the Canadian trade can disprove this as a general truth, but I have no personal knowledge of the condition of affairs in the Dominion. As I don't suppose that there is much motoring in the tropics or arctic regions yet, what has just been said need not affect the progress of the motoring macintosh referred to at the beginning of this paragraph.

ALTHOUGH the fire at the Dunlop Works at Aston Cross on March 20 was not quite so disastrous as the first reports indicated,

SERIOUS  
FIRES.

it must rank as the most serious which has occurred for a long time at a British rubber factory. The ignition of naphtha vapors from a spreading machine seems to have been the cause, no doubt an electric spark being primarily responsible. Another fire of a disastrous nature occurred at the premises of the Patcho Co., in Bradford, Yorkshire, being due to an explosion of carbon bisulphide. I cannot say that I am altogether surprised at the occurrence in view of the dangerous nature of the company's product. Nor is it surprising to hear that the premises were not insured. The English insurance companies will not insure where this liquid is, used at any premium, and indeed they are getting very particular where naphtha, a much less dangerous article, is used. I have no knowledge of or animus against the directorate of Patcho, but I consider it a menace to public

safety to sell such tire cement at shows with no notices as to its extremely inflammable nature. An important point about the manufacture of such preparations is that at least one of those responsible is thoroughly familiar with the properties of the fluid. This may or may not have been so in the case under notice but certainly in other cases where people in a small way of business have started making rubber cements with various solvents I have not found the management half alive to the dangers to be guarded against. In such cases the refusal of landlords to let premises for such purposes seems to me to be perfectly justifiable.

MOLYBDENUM is one of the rarer metals, being little known even among metallurgists and engineers. It is a safe assumption

MOLYBDENUM  
BLUE.

that it is even less an object of familiarity in the rubber trade. Molybdenum has recently come into prominence, however, as an ingredient in steel making, a small addition having a considerable toughening effect. The localities where it is found are not numerous, though recently it has been found in extensive deposits in Norway and a company with a capital of £100,000 has lately been formed to work them. The price of the metal has hitherto shown great variations, according to supply and demand, but I am not far wrong in putting it at about £1000\* at the present time. Now as to molybdenum blue this was suggested many years ago by Lascelles Scott as a suitable pigment for rubber, and from a German source it has recently been recommended for this purpose, it being stated to have no injurious effect upon rubber. I am not aware that it has actually ever come into use as a rubber pigment, and I do not see any chance of the price falling off so as to enable it to compete with ultramarine or other cheaper though doubtless less stable blues in regular use. By the way, the reference to this blue in Mr. Pearson's book is not quite accurate. The blue is not the natural bisulphide of molybdenum, nor has it been found chiefly in Sweden. The blue is an artificial product prepared chemically in two tints. In the first case molybdenum indigo is made by acting upon an hydrochloric acid solution of molybdic acid with tin filings, and in the second case the reaction of stannous chloride upon molybdic acid produces blue carmine. As far as I am aware these molybdenum colors have not yet come into use in the British rubber trade, whatever may have been the case elsewhere. If a demand should arise I imagine that we shall see a reduction in price as there seems every likelihood of an output of molybdenum ore in the near future in excess of any demand likely to arise in the steel industry.

IN London financial circles there is a growing disposition to consider the planting of rubber as a sound investment. Certainly the present high price of Pará rubber and the condition which companies of some years foundation can show are calculated to promote a feeling of optimism with regard to future profits and stability. The £1 shares of the Pataling Rubber Estates Syndicate are now quoted at £2, and I understand that the company is already in a position to pay a dividend, though for reasons connected with its articles of association, no distribution will be made at present. The Selangor Rubber Co.'s shares also show

\*A New York house advises the THE INDIA RUBBER WORLD that the quotation for Molybdenum, practically pure, is £1000 per pound which would bring it to £1000 per ton, the price of the metal in the London market.



a considerable rise in market value. New companies continue to be brought out, Stock Exchange quotations being applied for, and no doubt we shall soon see some such speculation in rubber shares as characterized the evolution of the Kaffir mining market. Planters do not feel any apprehension lest the present high price of rubber should show a diminution, and certainly if the figures given to me are accurate it is clear that the drop in price would have to be a very considerable one before the possibilities of paying a 10 per cent. dividend are wiped out.

THE Continental Tyre and Rubber Co. (Great Britain), Limited, has recently been registered in London with a stated capital of £10,000. Though the articles refer to the manufacture of tires it is probable that the concern will be limited to the sale of the tires made at Hannover.—There is nothing to be heard about the projected English Michelin company. In the meanwhile motor car builders in this country have been somewhat surprised by the receipt of a circular from the Michelin firm at Clermont-Ferrand seeking to impose somewhat severe restrictions upon dealers in their tires. Space does not permit of my giving the restrictions in detail and I will content myself with a word as to the effect of the circular. As a rule it has been strongly objected to as out of all reason, now that the tire monopoly has fallen through. I understand that those who accepted the agreement generally ran their pens through some of the clauses, and that these *deletions* were accepted by the tire firm.—There can be no doubt of the largely increased demand of rubber for motor omnibus tires; these vehicles are being largely adopted and have undoubtedly come to stay, though one cannot speak as confidently with regard to all the companies which are being brought out to work them. As the tire equipment of a vehicle costs about £100, it will be recognized that there is plenty of business in store for the tire makers. By the way, a word of explanation on the railway motor development may not be superfluous. The railway companies are now on branch lines adopting the steam motor; this, it should be understood, is a railway coach and steam engine on one set of wheels and runs on the line like an ordinary train. Naturally this development does not involve the use of rubber tires; where these come in is in connection with the motor 'buses which the companies use as feeders to their lines in places where railway accommodation is absent or inadequate for the needs of the district.

AMIDST the plethora of patents and processes for dealing with waste rubber are many which apparently have had their day and passed into desuetude. One such has reference to the utilization of old buffers for the production of cord and thread. Some twelve years ago a small Manchester firm of waste rubber dealers bought up a large stock of old railway buffers and cut them into rectangular pieces to serve as the core for packings of the Tuck pattern. Their difficulty was to get a continuous length of cord and they put the matter into the hands of an engineer who finally devised a certain type of tool which enabled the buffers to be cut into cord of diameter as low as  $\frac{1}{8}$  inch. The larger diameter stuff was used as packing core and the smaller it is stated for elastic side boots, though I must say I am somewhat sceptical as to how far this latter application came into use. At any rate the firm in question seem to have made a good thing of the business as they afterwards blossomed out into a more pretentious line of business in connection with it. Of course old rubber was procurable on more easy terms twelve years ago than at present and the profits on its sale were correspondingly greater. In contradistinc-

tion to what appertains generally to old rubber the more heavily compounded buffers were found more valuable for the purpose than those containing the purest rubber, the latter presenting difficulties in the way of cutting into thread.

HAVING lately been concerned in some attempts which are being made to utilize the waste material of the West Indian banana industry, I have re-read with some interest the few lines on *musa* or banana rubber in Mr. Pearson's book. The author states that this rubber is not yet on the market, though the process for its production has been patented in England by Mr. Otto Zurcher, of Kingston, Jamaica. I understand from a gentleman who has lived in Jamaica that Mr. Zurcher is a German chemist who acted for some time as manager of the tobacco estate of the Hon. Evelyn Ellis, a scion of the British nobility at Montpelier. I am not altogether surprised that banana rubber is not to be found on the market and it would take a good deal to convince me that it has any commercial value. In connection with this patent it is interesting to note that the individual who has been engaged in recent years in exploiting a secret chemical process for obtaining rubber from West Indian fibers referred specially to the fibrous bark of the plantain—practically the same plant as the banana—as a useful and plentiful source from which to derive his rubber.

IT is with some little surprise that I note the departure of Mr. J. W. O. Walker from the post of manager of the Dunlop Rubber Co.'s factory at Etchells, Birmingham. After some years in a subordinate capacity at Messrs. Charles Macintosh & Co.'s works, Mr. Walker went to Glasgow to the factory of Messrs. George McLellan & Co., where he rose to be manager. Four or five years ago he went to the Dunlop company works under an agreement for a term of years which it may be presumed has recently expired. Mr. Walker has again gone to Manchester to superintend the rubber department of Messrs. F. Reddaway & Co.'s belting mills. His old place at Birmingham, I understand, has not yet been filled.

### UNDER THE BAN OF THE LAW.

IN a suit brought by a firm of Frankfurt o/M. against a customer at Mannheim, for failure to accept certain rubber goods ordered, the Mannheim court sustained the customer, on the ground that the transaction involved a contract in violation of good morals, and was therefore illegal. A similar case tried in Strassburg resulted in a like decision. Commenting upon these cases, the *Gummi-Zeitung* asserts that the articles thus brought under the ban of the law are more largely sold by apothecaries on the prescriptions of physicians than otherwise, and that the court has gone too far in assuming all use of articles thus having the warrant of sanitary science to be immoral. The *Gummi-Zeitung* suggests that the prohibition of the public offer of goods for which a demand exists will open the door to a clandestine trade in which dishonest dealers may be expected to figure, while reputable makers will see a decline of business.

An act of the United States congress, dated February 8, 1905, imposes a heavy penalty for the carrying of certain classes of goods, by express companies or otherwise, from one state to another, or the delivery to or acceptance from any common carrier of such goods, which have been or are to be conveyed from state to state, or the importation or exportation of goods of the prohibited classes, the scope of the law plainly bringing within the prohibition the subjects of the recent judicial decisions in Germany.

BANANA  
RUBBER.

MOTOR  
TIRE  
NOTES.

A  
WASTE RUBBER  
REMINISCENCE.

## MECHANICAL RUBBER MANUFACTURERS' DINNER.

THE second annual banquet of the Mechanical Rubber Manufacturers' Association of the United States was enjoyed at the Waldorf-Astoria, New York, on the evening of April 6. The members of the association and their guests gathered in the spacious reception rooms on the Fifth avenue side and after a half hour's social adjourned to the beautiful "myrtle room," where covers were laid for eighty. All of the appointments, the arrangement of the tables, the floral display, the music, and the *menu* were in the best possible taste and were thoroughly appreciated.

The guests' table was on a platform facing the eight round tables at which the audience gathered. Here sat B. G. Work, the president of the association, with Commodore E. C. Benedict at his right and Colonel Samuel P. Colt on his left. Others seated at this table were H. D. Warren, president of the Gutta Percha and Rubber Manufacturing Co. of Toronto; E. S. Williams, general manager of the Revere Rubber Co. (Boston); W. H. Hillman, secretary of the association; C. Edward Murray, Trenton; and Henry C. Pearson.

When the wants of the inner man had been fully satisfied, President Work called the feasters to order and in a few well chosen words introduced Commodore Benedict. The speaker caught the fancy of the audience from the start by stating that Public School No. 10 at Buffalo, from which he graduated many years before, did not teach oratory. It therefore remained for him to dance a jig or sing a song. To the former accomplishment he had brought a well developed case of lumbago, and as for the latter, while they might catch the words they would probably go outside to get the "air." He felt at home, however, with those who fought together by day and dined together at night. When he was formally in gas fights the evening usually brought the warriors of the day together to feats gastronomic. When a boy he said he would at any time play hooky to see a lathe or a boat. His desire to be a machinist had been nipped in the bud by his 56 years in Wall street, but his ambition to be a sailor had been in part realized. When he first reached New York he had ten friends who had always stuck to him (his fingers) and one of the first things they found to do was the founding of the shipping firm of Benedict & Corning—not to own ships, but to put ventures on them. They used to buy crude Pará rubber and tapioca, the former at 28 to 30 cents a pound. Finally they bought too much tapioca and it spoiled in transit, wrecking the firm, and since then he never could eat tapioca without gagging.

Reverting to his recent trip up

the Amazon, he claimed that the newspapers had already covered all of it that was "fit to print." His had been the second vessel to carry the American flag up that mighty river. He had been royally entertained, received gold headed canes, banquets, and addresses of welcome, and had made speeches in return in English which few of his hearers could understand. Had they understood his remarks concerning his early ventures in rubber they certainly would have dubbed him the rubber Methuselah.

One sad fact the speaker emphasized was that each ton of rubber coming from the Amazon costs a human life. He graphically sketched the shipment of the steamer loads of famished Cearenses up the great river where, the first year, 50 out of each 100 die, the second year 25, and the third year the remainder are acclimated but partial invalids. Thus a \$250 family is worth very shortly \$1000 to the *aviadores*. Another point that he made was that the extremely high prices of rubber had decreased the Amazonian product one-seventh instead of increasing it, as the workers did not have to work as hard

or as long to earn the amount of money that satisfied them.\* Nor was it feasible to get other help, for Japanese coolies would not go up there, and the Chinese were not allowed to. It was a battle between nature in its most savage aspect and civilization, but in the end the latter would win out—just how, he did not know.

Colonel Samuel P. Colt, who had the promise of the secretary that he would not be called on, but was by the invitation of the toastmaster and the manifest wish of the audience, then got upon his feet. He explained earnestly that he came unprepared; that he had insisted before accepting the invitation to the dinner that he had no time to prepare a speech, and after a pause drew out the manuscript of his recent speech at the New England Rubber Club, saying: "I take it that none of you read THE INDIA RUBBER WORLD, in which paper this was printed, and I am therefore going to read a few extracts

only." After reading and commenting interestingly he threw down his manuscript, and reviewed the rubber industry as a whole most comprehensively. Speaking of the search for substitutes he recalled the time when the late Joseph Banigan told him of a mine of rubber (elaterite) that he had found in Utah, but so

\* With all due respect to Commodore Benedict, it is probable that he has studied the recent statistics of crude rubber production as a whole less closely than the details of the rubber business with which he is so much interested. At any rate, it seems proper in this connection to point to the figures contained on page 260 of this Journal, which indicate that, while the Amazon output does not grow largely, year by year, it does not show a falling off.



COMMODORE E. C. BENEDICT.

Director of the United States Rubber Co. and the General Rubber Co. Recently returned from a trip to the Amazon, on the yacht "Argonia."

## MENU

HUITRES DE CALE COD  
GOMBO DE VOAILLE CHENIANTIERE  
Rabais Oives Celer Anchoas salées  
ALOSE DE GERMETOWN DE PLANCHE  
Pommes de terre, Parisienne  
Salade de Concombres  
COQUILLES DE RIS DE VEAL ARCHIDUC  
MIGNON PETIT DE LUTHER CARDINAUC  
Pommes de terre, Palestine  
Pois nouveaux à la française  
Pommes de terre à la parisienne  
PINTADE DE JEAN LUIS ROTTE  
Salade de Saison  
GLACES ASSORTIES  
Petits fours Café Fruits



far it had not driven fine Pará out of the market, nor appreciably lowered its price. He then made an earnest plea for a broader view of life on the part of American manufacturers than the mere piling up of dollars, urging them to take an interest in questions that relate to the public weal, and to have a part in the bringing of the industry up to higher, better levels.

The Editor of THE INDIA RUBBER WORLD, who was then introduced, said he had just discovered a book entitled "The Art of After Dinner Oratory," the learned author of which gives this advice: "In order to secure the attention of your audience, tell some incident that will make them either laugh or weep—it doesn't matter which; then when you have their sympathetic attention proceed with the body of your speech." His choice, said the speaker, would be a humorous story at which all would laugh, but on the other hand, he had never had the pleasure of seeing any of them weep and so he had chosen a pathetic one instead. Then came the story:

Sixty years ago, on a cold winter's night, in a lonely little cottage in a small Massachusetts village, sat a man prematurely aged, but with the spark of genius still burning in his sunken eye. The cottage had but one room, and but little furniture except a stove, and in one corner, a cot bed. On the bed tossing in feverish sleep lay a little girl. Close by the fire sat the man examining over and over again a strip of cloth upon which was spread some sticky gum like substance. Suddenly his reverie was broken by the voice of the child:

"Father, I am so hungry."

Without a word the great inventor rose—for it was Charles Goodyear—threw the cloth upon the stove and, buttoning his threadbare coat close about his attenuated form, hastened across the fields to a far off farm house, where the story of his want was listened to, and he soon returned bearing a loaf of bread and cup of milk. Entering the cottage with joyful step, he started toward the cot, but glancing at the stove, he stopped transfixed! What miracle had happened? The strip of cloth, covered with a sticky varnish of rubber and sulphur, under the influence of the heat, had become, *a 50 foot length of fire hose*, vulcanized, and ready for coupling! Thus was vulcanization discovered, as well as an equally valuable secret: how to make a little rubber go a long way.

Continuing, the speaker said that he had not gone to the rubber fields of the Amazon in his yacht, for two reasons. One was that the story of the conditions had been often told and was thoroughly known. Another was that he had no yacht. He had, however, seen the sources of crude rubber, wild and cultivated in most of the Central American states, and of far more immediate importance the cultivated rubber in Ceylon and the Federated Malay States. He said that he agreed with Colonel Colt that present relief, if it came at all, must come from the valley of the Amazon, and from the yet unexploited forests of Africa, and with Commodore Benedict that the question of a greater supply from the former source was almost hopeless. He did, however, see light for the future. For example, some 67,000,000 pounds of rubber had come out of the Amazon last year. This means approximately the tapping of 20,000,000 *Hevea* trees. At that time there were in the Far East certainly 20,000,000 healthy *Hevea* trees, some of them now coming into bearing. Contrasting the cost of collecting in the Amazon and in the East, he placed the former (export duty and costly labor) 75 cents a pound, the latter (cheap labor and no duty) 25 cents a pound. Just to show that the British planters were not dreamers or speculators, he cited the tea industry of Ceylon, with its 156,000,000 pounds of tea leaves, and asked if the same enterprise would not get out 156,000,000

pounds of rubber? He then closed by briefly reviewing the interest felt in rubber planting the tropical world over, citing the *Hevea*, the *Castilloa*, the *Ficus*, the *Funtumia*, and the *Manihot*, as trees proved beyond all question to be susceptible of cultivation.

Mr. H. D. Warren was then listened to in a speech that for grace and for finish was delightful. Alluding to those who had spoken before as "professional speakers," with whom he had nothing in common, he suggested that in view of the high death rate that Commodore Benedict discovered up the Amazon he must have gone up there for his health. Commenting upon Colonel Colt's earnest plea for men who work less for the dollar and more for the good of the trade, he said he saw in it the true missionary spirit, and that he foresaw that the great company of which the Colonel was the head were about to make it easier for the poor devils of outsiders to get their crude rubber. He said further that he had discovered that white men who drank heavily were able to withstand the dangers of tropical climates, and that he had not long before written to the Editor of THE INDIA RUBBER WORLD suggesting that all hard drinkers on this continent be arrested and sent to gather rubber. He said the suggestion came to nought because the Editor wrote him saying he feared that such a procedure would leave no rubber manufacturers in Canada.

Following this fun the speaker spoke earnestly of the opportunity, and a practical one, for the manufacturer to look into the question of wastes in his factory. He held that "between the tree and the factory" (not in the storehouse, where there is usually a gain) were many wastes that if stopped would notably increase the effectiveness of the present rubber supply.

After toasting the guests and singing to each "For He's a Jolly Good Fellow" the annual banquet became a pleasant memory.

#### REMARKABLE SERVICE OF A RUBBER BELT.

TO THE EDITOR OF THE INDIA RUBBER WORLD: There is in use in a factory in this city a ten inch rubber belt, 150 feet in length, which has been in use constantly from nine to twelve hours per day for 25 years, and to observe this belt at present, one could hardly believe it possible, that at the expiration of a quarter century, after such great service as it has rendered, that it could be in such fine condition. This belt is to-day doing considerable more work than usual, and its shape is as perfect as when new. I write this to show the desirability of such belting for ordinary factory purposes over leather.

H. W. M.

Cleveland, Ohio, April 24, 1904.

#### SALES OF SECOND HAND TIRES.

[FROM "THE BICYCLING WORLD,"]

ALTHOUGH it is not generally known, there is considerable trade in second hand tires—the high grade brands, it is almost unnecessary to add. They are bought by riders who cannot, or will not, pay the prices of new goods, and are yet keen enough to save money or to prefer a used tire of reputable manufacture to the shoddy, unknown article. Usually such sales are all "velvet" to the dealer or repair man. The old tire has usually been taken from a bicycle on which new tires have been substituted, and by judicious repairing or vulcanizing and chalking or sand papering the surface it is made serviceable or good appearing. These old tires bring from 75 cents to \$1.75, and occasionally more.

## RUBBER GOODS MANUFACTURING CO.'S REPORT.

THE sixth annual meeting of the shareholders of the Rubber Goods Manufacturing Co., incorporated under the laws of New Jersey, was held on April 13, at the registered offices of the company in that state, in Jersey City. The following statement to the shareholders was presented by the president, Charles H. Dale:

"In submitting the sixth annual report of the company, I am pleased to state that it shows an increase in volume over the preceding year, notwithstanding the depression in business which existed from August, 1903, to July, 1904. During the year 1904, however, the price of crude rubber was from 12 to 14 per cent. higher than at any time previous in the history of the industry, and this, of course, has had its effect on the profits.

"Particular care and attention has been given to all the plants to maintain them in a condition of highest possible efficiency. Business is now in a satisfactory condition and all the subsidiary companies show a surplus at the end of the year."

The customary annual business report was presented, accompanied by a certificate by the company's auditors, Messrs. Bragg & Marin, certified public accountants, and the whole approved. In the report as presented, all statements referred only to the last business year. But for convenience of comparison, the corresponding figures for the four previous years, are here included, in connection with the Balance Sheet shown on this page, as given in the respective annual reports.

## THE NEW DIRECTORATE.

THE annual election for directors resulted in no change in the board beyond the substitution of Maurice I. Blanchard for William T. Cole. The list is now as follows:

CHARLES H. DALE, No. 68 Murray street, New York.  
 ERNEST HOPKINSON, No. 253 Broadway, New York.  
 TALBOT J. TAYLOR, No. 30 Broad street, New York.  
 HARRY KEENE, No. 253 Broadway, New York.  
 CHARLES A. HUNTER, New Durham, New Jersey.  
 FRANK W. EDDY, Detroit, Michigan.  
 EDWARD LAUTENBACH, No. 22 William street, New York.  
 ARTHUR L. KETLEY, Providence, Rhode Island.  
 MAURICE I. BLANCHARD, vice president and manager Mechanical Rubber Co., Cleveland, Ohio.  
 HOWARD O. SMITH, president Indianapolis Rubber Co., Indianapolis, Indiana.

CHARLES J. BUTLER, president Morgan & Wright, Chicago, Illinois.  
 WILLIAM SEWARD, Jr., treasurer Hartford Rubber Works Co., Hartford, Connecticut.

E. J. COUGHLIN, general factory manager, Mechanical Rubber Co.  
 W. J. COURTNEY, railroad manager Peerless Rubber Manufacturing Co.

JOHN H. COBB, general manager New York Belting and Packing Co., Limited.

The executive committee remains as last year: Messrs. Dale, Hopkinson, Keene, Taylor, Hunter, Seward, and Coughlin.

At a meeting of the reorganized board the following were reelected officers for one year:

*President and Chairman Executive Committee*—CHARLES H. DALE.

*Vice Presidents*—ERNEST HOPKINSON, TALBOT J. TAYLOR, and CHARLES A. HUNTER.

*Secretary and Treasurer*—HARRY KEENE.

*Assistant Secretary and Treasurer*—JAMES MCGUFFOG.

The value of sales reported by the company for the several years has been as follows:

1900	.....\$13,364,090	1903	.....\$14,310,752
1901	.....14,348,048	1904	.....14,556,289
1902	.....13,999,329		

It is understood to be the policy of the company not to resume dividends on the common stock until the surplus indicates a probability that the payment of such dividends can be maintained regularly.

## INCOMES AND DISBURSEMENTS.

FOR YEAR ENDING MARCH 31, 1905.

Balance brought from 1904	.....	\$	360,844.76
Income from dividends declared by allied companies for year	.....		756,790.16
Total	.....	\$	1,117,634.92
Expenses paid for year	.....	\$	117,759.99
Charged off, loss on properties, contracts, guarantees, and for depreciation	.....		18,688.27
Total expenses, etc.	.....		136,448.26
Net income	.....	\$	981,186.66
Four dividends paid to March 31, 1905, preferred	.....		563,598.00
Balance, surplus	.....	\$	417,588.66

[CONTINUED ON NEXT PAGE]

## BALANCE SHEET FOR 1904-05, COMPARED WITH FORMER YEARS.

	ASSETS.				
	Mar. 31, 1905	Mar. 31, 1904	Mar. 31, 1903	Dec. 31, 1901	Feb. 1, 1901
Cash	\$ 349,164.64	\$305,848.98	\$ 50,619.36	\$ 74,323.07	\$125,746.12
Mortgage notes (for property sold)	23,000.00	31,000.00	31,000.00	15,000.00	.....
Accounts receivable	5,244.33	3,920.68	205,537.13	876,856.83	45,585.19
Treasury stock at cost	.....	.....	.....	292,443.00	.....
Plants owned	.....	.....	120,000.00	.....	.....
Office furniture and fixtures owned	.....	3,547.08	1,026.80	110,856.05	.....
Net earnings of properties less amount received to date	.....	.....	.....	.....	1,271,783.77
Investments, Stocks of allied companies	25,033,279.69	25,015,279.69	24,808,279.69	24,928,646.83	25,141,149.09
Total	\$25,410,688.66	\$25,359,590.43	\$25,222,462.98	\$26,298,125.78	\$26,884,264.47
	LIABILITIES.				
	Mar. 31, 1905	Mar. 31, 1904	Mar. 31, 1903	Dec. 31, 1901	Feb. 1, 1901
Bills payable (for money borrowed)	\$	\$	\$	\$ 450,000.00	\$
Accounts payable, to allied companies	.....	.....	.....	597,326.42	.....
Accounts payable, to others	.....	5,681.67	.....	53,057.44	.....
Deposits by companies	.....	.....	.....	.....	405,317.33
Preferred stock	8,051,400.00	8,051,400.00	8,051,400.00	8,051,400.00	8,051,400.00
Common stock	16,941,700.00	16,941,700.00	16,941,700.00	16,941,700.00	16,941,700.00
Total	\$24,993,100.00	\$24,998,751.67	\$24,993,100.00	\$26,094,083.86	\$25,398,417.33
SURPLUS	\$417,588.66	\$360,844.76	\$229,362.98	\$204,041.92	\$1,485,847.14



## VALVE AND RING CUTTING MACHINERY.

EARNINGS OF THE RUBBER COMPANIES FOR 1904, AND DEPOSITION.

Net unapplied earnings, as per previous report..... \$ 865,166.96  
 Earnings of the companies for the year...\$1,901,630.02  
 Charged off for maintenance and repair... 178,331.50

Net profit for 1904.....\$1,723,298.52

From the above there has been  
 set aside:

For sinking fund for bonds \$ 56,308.90

For additions to plants... 388,037.43

For depreciation..... 128,234.63 572,580.96

Leaving a balance of..... 1,150,717.56

Making a total of... \$2,015,884.52

Out of which dividends have been declared for the year  
 ending March 31, 1905..... 810,746.16

Net unapplied earnings of allied companies..... \$1,205,138.36

Less amount owned by stockholders other than the Rubber  
 Goods Mfg. Co..... 33,601.89

Net unapplied earnings belonging to the Rubber Goods  
 Mfg. Co..... \$1,171,536.47

Of the above dividends..... \$810,746.16

There was paid to stockholders other than the Rubber  
 Goods Mfg. Co..... 53,956.00

Dividends paid to Rubber Goods Mfg. Co..... \$756,790.16

## INDIA-RUBBER GOODS IN COMMERCE.

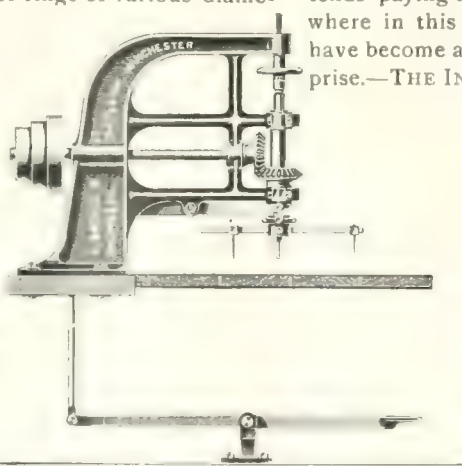
## EXPORTS FROM THE UNITED STATES.

OFFICIAL statement of values of exports of manufactures  
 of India-rubber and Gutta-percha, for February, 1905,  
 and the first eight months of five fiscal years, beginning July  
 1, from the treasury department at Washington:

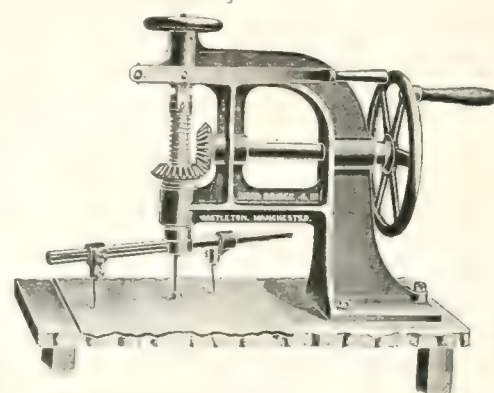
MONTHS.	Belting, Packing, and Hose.	Boots and Shoes.	All other Rubber.	TOTAL.
February.....	\$ 60,771	\$ 46,861	\$ 203,030	\$ 310,662
July-January. ....	530 538	971,261	1,338,168	2,839,967
Total .....	\$591,309	\$1,018,122	\$1,541,195	\$3,150,629
Total, 1903-04....	506,536	901,017	1,586,720	3,084,273
Total, 1902-03....	524 847	912 555	1,407,722	2,845,424
Total, 1901-02....	401,559	885,561	1,077,189	2,364,309
Total, 1900-01....	313 500	612,279	1,112 708	2,068,496

## VALVE AND RING CUTTING MACHINERY.

IN every mechanical rubber factory and indeed in many  
 others, there is a constant call for rings of various diame-  
 ters for valves, packings, and for a thousand and one special uses.  
 There is such an infinite variety of  
 sizes called for that a series of  
 punches so cut them would cost a  
 small fortune. A very simple machine  
 has been designed, therefore,  
 and is in use in almost every factory.  
 A great many factories, in-  
 deed, build them in their own machine  
 shops. The machine, briefly  
 has an overhang something like the  
 arm of a sewing machine. At the  
 extreme end of this is a vertical  
 shaft with a centering piece, while  
 through the shaft, at a short distance  
 above the stock, runs a horizontal  
 bar upon which one or more



POWER CUTTER FOR VALVES.



HAND CUTTER FOR VALVES.

knives may be clamped. In the middle of the vertical shaft  
 is a bevel gear to which power is applied to rotate the shaft  
 and swing the knives in circles on and into the surface of  
 the stock. The pressure foot of the shaft is set down upon the  
 stock and the knives started cutting by a hand lever, the whole  
 being drawn away from the stock by a powerful coiled spring,  
 once the lever is released. The cutting machine is arranged  
 either to be operated by the turning of a crank by hand, or it  
 may be driven by power, the illustrations at the foot of this  
 page showing one of each type.

## SIR THOMAS LIPTON ON RUBBER.

[FROM AN INTERVIEW IN "THE TIMES OF CEYLON," MARCH 2, 1905.]

INDUSTRIALLY, the future of Ceylon, unless something  
 turns up which we are not aware of, is a bright future.  
 With good judgment, it is almost certain to turn out a first class  
 investment for any one who cares to put his money into rubber.  
 There are thousands of acres being opened up and planted with  
 rubber all over the country. I have no doubt there are other  
 places suitable for rubber, and they will join Ceylon in increasing  
 the supply of rubber. But I have a feeling that the demand  
 later on will be much greater than it is at the present time, and  
 the rate of the demand will increase with the increase of the supply,  
 even when all these new plantations come into bearing."

"In what way?"

"My belief is that the day is not far distant when the trans-  
 portation of all goods throughout England, Scotland, and Ire-  
 land will be done on rubber. Rubber is now used largely as a  
 means of pleasure and luxury only, on motors, cycles, etc., and  
 while this demand is even now considerable and growing, it is  
 like a pebble on the seashore to what the demand will be for  
 rubber when motor transport develops into a necessity to the  
 merchant. The time will come when it will no longer be  
 optional but compulsory for the business man to keep abreast  
 of the times and use the fastest and easiest mode of locomotion  
 for his goods. Quick delivery of goods is always an important  
 factor for success in trade. What I say of the United Kingdom  
 applies equally to France, and Germany, and America, and the  
 rest of the world.

"The man who is in rubber has a great prospect before him,  
 and when that time comes, you will reckon the man who is in  
 tea as very small fry indeed. When I next come to Ceylon,  
 the tea man will have sunk into insignificance in comparison  
 with the rubber magnates who will be here."

[It would be of interest to know in what year Sir Thomas intends  
 paying his next visit to Ceylon. A Ceylon report else-  
 where in this paper indicates that Sir Thomas may already  
 have become an investor in an extensive rubber planting enter-  
 prise.—THE INDIA RUBBER WORLD.]

## THE LEYLAND WORKS AND ITS MANAGER.

AN important English rubber works that has not in the past had more than an occasional mention in these pages is that of The Leyland and Birmingham Rubber Co., Limited, situated in the village of Leyland, on the main line of the London and Northwestern railway (west coast line), about five miles from Preston, in Lancashire. In point of age this factory is exceeded by few rubber concerns in the Kingdom, its beginnings having been made over 40 years ago by the late James Quin, who, having become a proficient rubber worker in the establishment of Charles Macintosh & Co., left their employ to engage in the industry on his own account. After a number of years, during which the business had acquired considerable proportions, it was converted into a public company, under the style James Quin & Co., Limited, with £100,000 capital, and devoted to the production of mechanical rubbers and waterproof goods.

In 1883 another reorganization became desirable, when the plan was adopted of reducing the capital stock, and forming a new company. The name adopted was The Leyland Rubber Co., Limited, and the business was placed under the management of Mr. James E. Baxter, who at the age of 21 years had begun his business career in the capacity of junior invoice clerk in the Quin factory, and had gradually made himself familiar with many details of the business. It was, in fact, upon his suggestions that the reorganization plans were largely based, and during the succeeding 22 years Mr. Baxter has remained in charge of the management.

From the beginning the new company conducted a profitable business, gradually extending the scope and volume of its trade, and in 1898 an important event occurred, in the incorporation with it of two other well established concerns. One was Stanley Morrison & Co., Limited (prior to 1896, A. S. Morrison), of London, extensive traders in mechanical rubbers including the "Bear" and other widely known packings, and also asbestos goods on a large scale. The other was the Birmingham Rubber Co., established for over 50 years, as a selling rather than a manufacturing concern, and having important connections. This was owned by the family of Byrne, well known in connection with the British rubber trade. The amalgamation, under the style of the Leyland and Birmingham Rubber Co., Limited, represented a capital of £300,000, and embraced a well established trade in all branches of the rubber industry, with the exception of rubber footwear and rubber thread.

The balance sheets which the new company's board have been able to submit year after year have been extremely satisfactory to the shareholders, while the rate of dividends has placed the company in a particularly enviable position, as evidenced by the rating of its shares in the stock exchange quotations of London, Birmingham, Manchester, and Liverpool. The dividend rate since the formation of the amalgamated company has been as follows:

1899.	1900.	1901.	1902.	1903.
6½ %	6½ %	7½ %	7½ %	8½ %

The capital of the company is wholly in ordinary shares, and there are no debenture issues; the reserves are ample, and

a liberal writing off for depreciation has always been made.

However devoid of beauty the manufacturing district of South Lancashire may be in general, a more attractive countryside could hardly be found than that which forms a setting for the village of Leyland, where are located the works of the company here referred to. There are even pheasant preserves and rabbit warrens within almost a stones' throw of the eight blocks of buildings, roughly in the form of a square—spacious, lofty, specially designed, and scientifically ventilated—which form the present plant of the company, having gradually supplanted the structures originally used. The fine offices especially deserve mention, less for their attractiveness and fitness for their purpose than for the efficient system which exists there of supervision of the company's work of production and supervision. Besides having branches in London and the leading provincial towns, the company carries on a very extensive export trade, particularly with China, India, Japan, Australia, Turkey, Sweden and Norway, Mexico, South America, and lately with South Africa. A branch has been established in Johannesburg, which Mr. Baxter is disposed to believe is the coming center of a highly developed community.



JAMES E. BAXTER.

Mr. Baxter, whose portrait is presented herewith, is chairman of the board of the Leyland and Birmingham Rubber Co., Limited, being assisted in the control of its affairs by co-directors, all of whom are practical men in their respective departments of the company's work, to wit: Messrs. Arthur Stanley Morrison, in charge of the London business; Robert T. Byrne, in charge of the Birmingham trade; S. Whitehead, the works director; and Jonathan Shutt, the financial director.

Mr. Baxter was one of those active in the organization of the India Rubber Manufacturers' Association of Great Britain, the influence of which in the industry in that country has been most salutary. During the year 1901-02 he filled the position of its chairman and he has since been treasurer. In this connection it may be mentioned that Mr. Baxter's particular *forte* has been that of an organizer, as has been shown in his success in the man-

agement of the Leyland company, as well as in certain other businesses in which he is interested. Mr. Baxter is a director in the William Rose Hose Co., Limited (Manchester), large manufacturers of fire brigade supplies, and in various other companies having a less direct connection with the rubber trade.

Outside of his business associations, Mr. Baxter is an enthusiastic automobilist, being a member of the Automobile Club of Great Britain, and the owner of several cars, of which he makes an extensive use in traveling between "The Oaklands"—his home near Preston—and the various towns, as far away as London and Liverpool, to which his business may call him. Last year, on making his second visit, on business and pleasure combined, to British South Africa, he took with him a 20 HP. motor car, on which, accompanied by his wife and son, he traveled 3500 miles, starting from Durban, and taking in Johannesburg. He plays golf, of course, and has found time now and then for a good deal of shooting and yachting, though he continues to devote the greater part of his time and energies to the company at Leyland which figures most largely in this sketch. In politics, in which Mr. Baxter takes an active interest, he is an ardent supporter of Mr. Chamberlain.



## NEW GOODS AND SPECIALTIES IN RUBBER.

## THE GOODRICH TENNIS BALL.

THE growing interest in lawn tennis in the United States has induced The B. F. Goodrich Co. (Akron, Ohio), whose success in the manufacture of golf balls has become so pronounced, to engage in making tennis balls on an extensive scale, in which every part is a product of

their factory, whereas the tennis balls used here hitherto have had imported rubber centers. There are some peculiarities in the making of the "Goodrich" tennis ball, that the company refer to as giving them a marked advantage. In the first place, they use three thicknesses of rubber in the "center" shell, instead of two thicknesses as has been customary

heretofore, and the advantage is explained by the statement that calendered rubber stretches across the grain, rendering the balls likely to lose their exact roundness when inflated. In making the Goodrich ball two plies of the rubber are joined, with the grains at right angles, which effectually keeps the ball in shape. A third layer of an air tight solution of thin rubber is put inside the shell as a lining, to make it better hold compressed air, while the seams where the ball is put together are covered with extra "patches" to make them air tight. Another point of advantage claimed is in the sewing, which is the most important feature in the lasting quality of a lawn tennis ball. A ball in which a single stitch shows on the surface of the felt is likely to rip soon, through the thread at this point becoming cut, after which the cover soon becomes loose. "Goodrich" balls are "under sewn" entirely; that is, the stitches are taken from the side or edge of the felt, instead of the top, so that they do not come to the surface to be cut or ripped, and yet they hold the cover more firmly than those which do. These balls are tested for size, for weight, for firmness, for roundness, and for the stitching of the cover, and packed in tissue paper, three to a box, and sold under a guarantee, at what is stated to be not more than the price of other high class makes.

## DAVOL'S WHIRLPOOL SPRAY SYRINGE—NO. 212.

THE first of the cuts shown herewith relates to a vaginal douche spray which has been designed with a view to combining in one article the best features of the old style popular syringes with the modern whirlpool rotary spray principle, contributing to effectiveness and simplicity, and the ease in use and the comfort

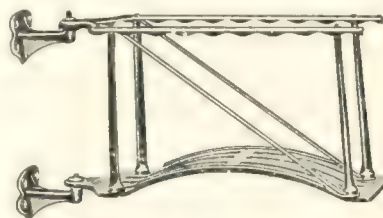
of the user. This syringe throws a rotating hollow mass of water, with the effect of thoroughly cleansing without the liability of harmful effects. It is constructed wholly of hard and soft rubber, having no valves to lose and no metals to corrode. The rubber shield fits perfectly, and prevents all chance of leakage.

The second cut relates to the household "Handy Line" of rotary spray syringes, capable of easy use with one hand. All the pipes are of hard rubber, and adapted to the rotary spray. [Daval Rubber Co. Providence, Rhode Island.]



## THREE HOSE NOVELTIES.

THE "Hartford" rack, illustrated in the first of the three accompanying cuts, is a variation of the "Dewey" hose rack



HARTFORD.

[See THE INDIA RUBBER WORLD, May 1, 1899—page 216], for interior fire hose equipment. In the new type, an arched instead of the straight bed plate is used, the result being that when the hose is coiled in the rack, the top of the pile is horizontal, and not concave. This rack is made in the same sizes as the "Dewey." It is made with wall brackets, and with pipe clamps. The racks are japanned red, with parts most liable to be broken in malleable iron. The Gibbs garden spray nozzle, shown in the second of the cuts, represents the result of many years' experimenting. The shut-off is positive, because it is made by a washer against a shoulder at the base of the pipe. It gives a fine spray, and, it is claimed, a greater variation of sprays than any other nozzle. The straight stream, of course, is the same as with any other



GIBBS' SPRAY NOZZLE

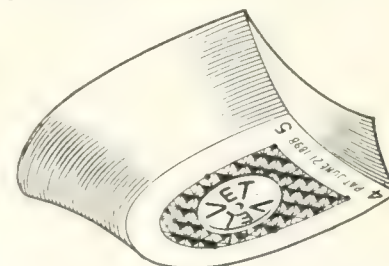


SYKES'S HOSE HOLDER.

hose pipe. The nozzle is made of few parts, its simplicity of construction rendering it not likely to get out of order. Sykes's hose holder, shown in the third cut, is a simple but very effective little article that sticks in the ground on the lawn to hold the hose, with a view to directing the spray when used in connection with a garden hose nozzle. This article is intended to retail at 25 cents, which price is referred to as allowing a good profit to the jobber and retailer. [W. D. Allen Manufacturing, No. 151 Lake street, Chicago.]

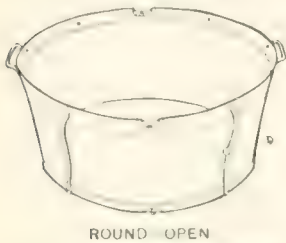
## A NEW LADIES' RUBBER HEEL.

RUBBER heels hitherto have been made for the most part in broad styles, which fact probably has led many ladies to refrain from wearing these heels. The manufacturers of the heel widely known as the "Velvet" have recently introduced on the market a heel of the French or military shape, as shown in the illustration, which is particularly neat in form and which is offered in color similar to leather heels, being "always black." This new heel is made in graduated sizes, to fit any call for a heel of this character. It is covered by the regular "Velvet" trademark, which the trade is warned not to infringe. [Frank W. Whitcher & Co., Boston and Chicago.]

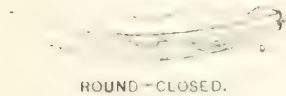


## HODGMAN'S "DUPLEX" FOLDING BATH TUBS.

THE "Duplex" folding bath tub, illustrated herewith in two forms, has been designed especially as a convenience to travelers, and is capable of being folded into a very small space, so that it will occupy very little room and be in the way as little as possible when not in use. These bath tubs are absolutely waterproof, the tan colored fabric which is used for the outside being coated on the inside with a fine red rubber. With a view to adding to their attractiveness in appearance, the top and bottom on the outside are trimmed to match the inside of the tub. The handles, rims, and uprights are made of spring steel, and when the tub is placed in position ready for use it is as rigid as the ordinary metal bath tub. The advantages claimed over the folding or adjustable bath tubs now in use are that the "Duplex" can be carried about when filled, without spilling the contents; can be emptied and filled more readily; can be folded into a very small space for traveling; and presents a much neater appearance than any other article of this kind now on the market. These bath tubs are light in weight, rigid and portable, durable, convenient, and hygienic. They are protected by United States patent No. 639,822. They are illustrated herewith in two forms—round and oval—and are supplied in six sizes, the two smaller of which are intended particularly for infants' use. [Hodgman Rubber Co., No. 806 Broadway, New York.]



ROUND - OPEN



ROUND - CLOSED.



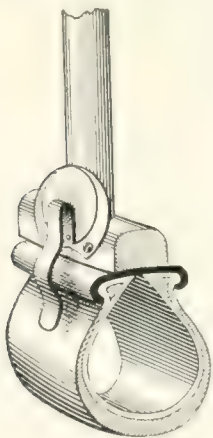
OVAL - OPEN.



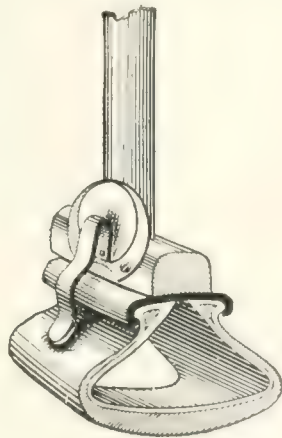
OVAL - CLOSED.

## BALDWIN PNEUMATIC TIRE ALARM.

THE object of this novelty, for which an application for a United States patent is pending, is to give an audible signal



TIRE INFLATED.



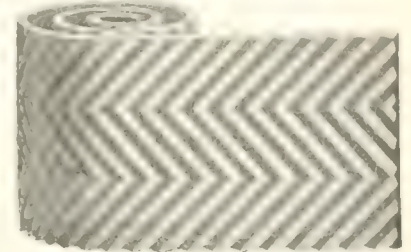
TIRE DEFLATED.

when the pneumatic tire to which it may be attached begins to deflate from any cause. It is a simple matter to be able to know when a tire needs attention—after it has become flat, probably as a result of a serious damage. But this Alarm tells the motor driver as soon as the tire begins to deflate, and this may be the means often of preventing serious damage to or destruction of the tread or inner tube or both. This device is

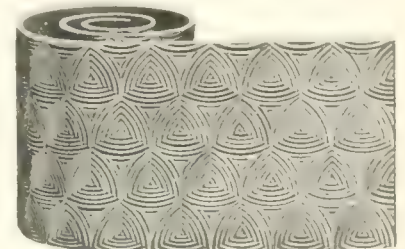
designed to fit any standard make of tires and is easily attached by means of two screws to the felloe of each wheel. The retail price is \$2 per set of four alarms. [Baldwin Chain and Manufacturing Co., Worcester, Massachusetts.]

## "DIALITE" MATTING AND TREADS.

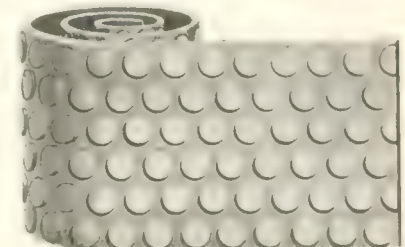
THE illustrations show three very neat patterns of rubber matting, made from "Dialite," which is an specially treated compounded rubber for which great durability is claimed. Whether it is greatly superior to the better grades of tread the writer has no information. The merit of the designs, however, speak for themselves, as they are exceedingly neat and effective. One special claim that the manufacturers make for this matting is that it has very high insulating properties and is, therefore, recommended for switchboards and electric power stations. In addition to the designs here shown the matting is made up in others such as the pyramid pattern and also into a very large line of artistic perforated mats. These goods are made in various colors, the standard being dark or drab, but reds, or indeed, any colors that go into floor tiling of rubber are supplied on order. These goods are made in rolls 6 to 12 yards long and any width up to 36 inches. [The St. Helens Cable Co., Limited, Warrington, England.]



FISHBONE PATTERN.



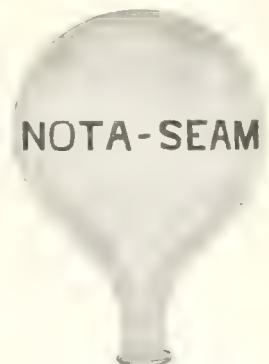
SPHINX PATTERN.



CYLINDER PATTERN.

## "NOTA-SEAM" GAS AND AIR BALLOON.

THE balloon represented in the accompanying illustration is manufactured in the United States and cured especially for this climate. Its production has been the result of many years of experimenting, and it is offered as the most nearly perfect balloon manufactured. On account of its durability, it is offered to the trade as an excellent advertising medium. The "Nota-Seam" balloon will inflate safely to 30 to 36 inches, and remain in perfect shape—for weeks if inflated with air, and for more than 24 hours if inflated with gas and varnished. These balloons are made in solid blue, cerise, red, orange, and white, or supplied in boxes of assorted colors, and can be had plain or printed with advertising matter. [George Borgfeldt & Co., West Fourth and Wooster streets, New York.]





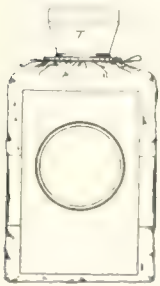
## THE BRYANT AUTOMOBILE RIM.

THE object of the new rim construction illustrated herewith is to obviate the necessity, in applying or detaching an automobile tire, of stretching it over the rim flange, as has been the general practice hitherto. Such stretching results in the tire cover becoming too large for the rim, rendering it less efficient

and less safe, and shortening its life. The salient features of the Bryant rim are (1) a removable flange, and (2) a locking ring for securely engaging this flange in place when in use. The cuts in cross section will sufficiently explain the idea. The steel spring locking ring is referred to as being easy to manipulate, and its use involves no turnbuckles, bolts, nuts, or clamps. When the tire is inflated the flange becomes absolutely locked. [The Bryant Steel Wheel and Rim Co., Columbus, Ohio.]

## THE "SQUEEZIT."

THIS illustration relates to a novelty for smokers, which is a rubber attachment for bags of tobacco, in the shape of a self closing mouth, which may be used successively for an indefinite number of bags. In the cut, the rubber device is represented by the letter T, the remainder of the cut showing the tobacco bag. The patent specification describes "A self closing mouth for a bag, comprising a pair of lips flexible throughout, meeting on a straight center line and widest at a central line at right angles to said meeting line, the lips tapering toward the ends, and an elastic tube adapted to hold said lips together." United States patent No. 744,846, issued to George W. Williams.



## A REVOLUTION IN WATER BOTTLES.

THE Hodgman Rubber Co. (New York), whose taste in producing goods that give the best of service and yet appeal to the eye is acknowledged by all, have surpassed themselves in the production of thin, light weight, cloth insertion hot water bottles. Indeed, they have actually revolutionized that portion of the sundries trade. Light ( $4\frac{1}{2}$  oz.), flexible, portable, smooth as glass—the old fashioned stiff bag cannot for a moment compare with the new. They are made in colors, each with an appropriate name—the "Sunset," in red; the "Sunrise," in white; and the "Twilight," in gray.

## COMMERCIAL MOTOR VEHICLES.

THE April issue of *The British Trade Journal* (London) contains a singularly comprehensive article on "Motor Vehicles for Commercial Purposes," in which the production of such vehicles is referred to as an important new British industry. It appears that at the two recent international exhibitions of motor cars in London more than 70 per cent. of the vehicles shown were of British origin. The *Journal* mentions that there are now 51,000 registered motor cars, and motor cycles [Probably one half of them motor cars.—THE INDIA RUBBER WORLD.] in the United Kingdom, of which 3500 are used for purely commercial purposes. Within the last year or two an impetus has been given to the construction of omnibuses driven either by steam or petroleum, and which have been found to have many advantages over any system of electric traction hitherto in use. Not only have several railway companies placed important orders for motor driven cars, to act as feeders to country railway stations and to compete near the large towns

with electric traction, but, as already reported in these pages, the principal omnibus companies in London are now experimenting with steam driven or petrol engined vehicles with a view to supplanting the horses now in use. In the colonies these vehicles, provided the roads are fairly good, seem destined to play even a more important part than in countries already equipped with networks of railways.

In the 16 pages devoted by *The British Trade Journal* to this subject, appear descriptions of the products of 21 British firms, embracing a striking variety of types of vehicles, of which no less than 27 are illustrated. These are designed for almost every conceivable commercial use, and represent a wide range of capacity and cost. The companies referred to include those which have contracted to supply the vehicles ordered by the British railway companies and the London omnibus companies, not to mention the Cape Government railway of South Africa, companies operating motor cars in India, and so on.

As a rule, the descriptions given of these vehicles relate more to their mechanical construction than to the character of tires used, but it is to be assumed from the illustrations given that, while some of the steam vehicles are steel tired, the usual type of tire is solid rubber. In one case twin tires are mentioned, and the article concludes with a mention of a special form of rubber tire, a specimen of which is stated to have traveled 17,000 miles on one of Harrod's Stores' motor vans, carrying a weight of 4 tons. Harrod's Stores, by the way, is the great London department store operated by a stock company—very profitably it is understood—and which on March 1 adopted the policy of delivering any purchase, however small, at any point in Great Britain. This is believed to be the forerunner of the policy of delivering goods, and likewise of the method referred to by Sir Thomas Lipton, in an important interview in a Ceylon newspaper, reported elsewhere in this *Journal*.

Reporting on the recent fourth International Automobile Exhibition at Berlin, the United States consul general there considers as specially worthy of mention the large proportion of vehicles shown of various types, for industrial and military purposes, as distinguished from those designed for luxury or sport. Crowds of merchants, manufacturers, and other business men were to be seen around these new transport vehicles, discussing eagerly their merit and economies as compared with horse power. All the Berlin department stores, and several breweries, furniture dealers, and the like, and even milk companies, now employ motor delivery wagons, and the municipal spirit is so strongly in favor of cleanliness in the streets that every encouragement is offered to the use of the new vehicles. The chief interest of the exposition, the consul general states, has been as a demonstration of the solid, substantial, and rapid progress of the German automobile industry, from the tentative subordinate position which it occupied four years ago, to a place in the front rank of automobile manufacturing nations.

The Hungarian department of commerce intends [says *Le Moniteur du Caoutchouc*] to purchase about 300 automobile cars for use on the railways of that country. The firm of Gauz & Co. (Budapest) has already received an order for the furnishing of 120 of these cars, amounting to about 4,300,000 francs [= \$829,900]. The intention is to have these automobile cars run in addition to the ordinary train service, whenever required.

The Sociedad de Automobiles para Carga, Limitada, has been incorporated, with \$214,280 capital, to convey freight between Lima and Callao, Peru. Five automobiles are now in use, with a capacity each of 5 metric tons, carrying cargo direct from the Callao docks to the consignees' warehouses in the city of Lima, a convenience not afforded by the two railroad lines or the trolley lines connecting the two towns.

RECENT RUBBER PATENTS.

UNITED STATES OF AMERICA.

ISSUED MARCH 7, 1905.

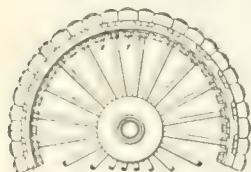
- N**O. 784,127. Window cleaner. W. Smith, Duluth, Minn.  
 784,166. Pneumatic tire. E. Larger, Toronto, Canada.  
 784,212. Hose coupling. M. Hirth, Butler, Pa.  
 784,283. Nozzle [for hose pipes]. C. H. Smith, Richmond, Va.  
 784,372. Hose coupling. W. H. Albee, New York city.  
 784,378. Composition for preserving India-rubber goods. [Consisting of one part turpentine, as much camphor gum as the turpentine will readily dissolve, and one part linseed oil proportioned to the combined part of turpentine and camphor gum.] O. F. Benton, assignor of one half to J. Shimp, both of St. Marys, Ohio.

ISSUED MARCH 14, 1905.

- 784,528. Fountain pen. T. P. Ambrose, Cincinnati.  
 784,538. Fountain pen. F. W. Bender, Hoboken, N. J.  
 784,580. Shoe [with cushion insole]. J. G. Marchand, Buffalo, N. Y.  
 784,648. Process of making rubber cored golf balls. G. C. Worthington, Elyria, Ohio.  
 784,695. Insulating lining [consisting of a tube having end portions of different diameters and having an elastic and compressible portion of greater diameter than the part within which it is to fit]. N. Marshall, Newton, Mass.  
 784,738. Pneumatic tire. T. Giara, Boston.  
 784,801. Carpet cleaning apparatus. [Pneumatic.] A. E. Moorehead, Oakland, Calif.  
 784,831. Insulating sheet or structure. C. S. Bird, East Walpole, Mass.  
 784,874. Mold [for tire making]. C. Miller, Binghanton, N. Y.  
 784,914. Nursing bottle holder. W. J. Boyle, Lewiston, assignor of one half to W. J. O'Brien, Bath, Me.

ISSUED MARCH 21, 1905.

- 785,116. Gasket or packing ring and apron therefor [the apron closing the opening in the ring, and the whole being dish shaped]. E. L. Perry, Paterson, N. J.  
 785,118. Vehicle tire. C. A. Pettie, New York city.  
 785,159. Hose reel. E. Dice, Canton, Ohio.  
 785,170. Vehicle wheel tire [having quadrilateral resilient tread abutments with metallic bearing faces]. H. D. Hubbard, Avalon, Pa.



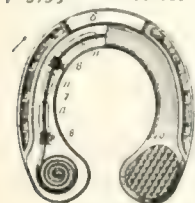
785,170.

- 785,184. Manufacture of playing balls [to be filled with compressed air]. A. T. Saunders, Akron, Ohio.  
 785,231. Composition for polishing and abrading tools. [Rubber, sulphur, hair, and an abrading or polishing substance]. W. Roberts, Glenridge, and G. S. Cox, Newark, N. J., assignors to C. Roberts Rubber Co.

- 785,233. Shower bath appliance. J. Simpson, Jr., Hamilton, Canada.  
 785,234. Manufacture of articles from hard rubber. [As a new article of manufacture, a material having a fabric interior, saturated and covered with a hard vulcanized compound of India-rubber and sulphur. See reference to the Reinforced Hard Rubber Co., in THE INDIA RUBBER WORLD, April 1, 1905—page 246.] W. R. Sine, Williamsport, Pa.

- 785,360. Hand Stamp. B. B. Hill, Philadelphia, Pa.  
 785,371. Overshoe. H. O'Sullivan [of the O'Sullivan Rubber Co.], Lowell, Mass.

- 785,391. Massage steamer. J. P. Weis, Nyack, N. Y.  
 785,392. Tool for removing insulation from wires. J. E. Williams, St. Louis.



785,414.

- 785,414. Horseshoe. J. W. Fisher, assignor of one half to F. Reifsnider, both Akron, Ohio.

- 785,503. Life saving appliance. G. Krieger, Brooklyn, N. Y.

- 785,523. Machine for forming flexible tubing. S. Scognamiglio, New York city, assignor to Automobile Supply Mfg. Co.

- 785,524. Surgical saline-infusion apparatus. J. J. Shea, Beverly, Mass.



- 785,577. Rubber horseshoe. A. Sanfield, Swissvale, Pa.

- 785,603. Vehicle tire. J. J. Fitzsimmons, Paterson, N. J.

- 785,633. Rubber tire repairer. J. M. Padgett, Topeka, Kansas.

- 785,638. Hot water bottle [with cork and fabric cover]. A. J. Scritchfield, Jamesville, Wis.

- 785,653. Fountain pen. C. W. Boman, New York city, assignor to Eagle Pencil Co.

- 785,654. Fountain pen. Same.



785,638.



785,603.

ISSUED MARCH 28, 1905.

- 785,822. Remnant tube. [An inner elastic receiving member, with fabric rolled thereon, and an outer spring clamping member for maintaining the fabric in place.] C. E. Mitchem, Harvard, Ill.



785 822.

- 785,824. Spray bath-brush and connection. A. W. Nicholls, Chicago.

- 786,067. Typewriter platen [having a wooden core, a flexible covering shiftable relatively to the core, and a removable rubber backing sheet upon said covering]. C. H. Stuart, Newark, N. Y.



785,824.

- 786,096. Tire [in sections]. J. F. Byers, Ravenna, Ohio.

- 786,097. Tire protector. N. Campbell, assignor of one half to B. Hayhurst, both Elizabethtown, Ohio.

- 786,223. Wheel [with resilient tire, having for its novelty a series of supplemental tread sections]. E. Kress, Albany, N. Y.

[NOTE.—Printed copies of specifications of United States patents may be obtained from THE INDIA RUBBER WORLD office at 10 cents each, postpaid.]

GREAT BRITAIN AND IRELAND.

PATENT SPECIFICATIONS PUBLISHED.

The number given is that assigned to the Patent at the filing of the Application, which in the case of those listed below was in 1905.

\* Denotes Patents for American Inventions.

[ABSTRACTED IN THE OFFICIAL JOURNAL, MARCH 9, 1905.]

- 24,459 (1903). Motor car alarm. [The horn is blown by air supplied from a reservoir and controlled from a button on the steering wheel; bellows operated by a cam may be used instead of the pump.] R. M. Ford, London.

- 24,686 (1903). Chrome leather cover for elastic tires [secured to the tire by rubber solution or vulcanized on]. J. G. Grose, Northampton.

- 24,718 (1903). Inhaler for anesthetics. E. J. Deck, St. Leonards-on-Sea, Sussex.

- 24,753 (1903). Tool for removing pneumatic tires or covers. S. A. Horstmann and R. C. L. Fuller, Bath.

- 24,771 (1903). Non-skidding device for pneumatic tires. Sainsbury's Anti-Skidders, Ltd., London, and W. D. Sainsbury, Dublin.

- 24,811 (1903). Elastic anklet [for excluding dirt from boots]. J. Stevenson, Berwick-on-Tweed.

- \*24,837 (1903). Exercising apparatus. A. J. Boulton, London. (Cartilage Co., Rochester, New York.)

- 24,846 (1903). Spring or pneumatic wheel. [Resiliency secured by the use between the members of the wheel of springs, cylinders with plunger pistons, India-rubber cushions, or pneumatic tubes.] M. H. Smith, London.

- 24,852 (1903). Exercising apparatus. A. E. Terry, Redditch, Worcestershire.

- 24,890 (1903). Pneumatic tire [having the tread flattened to lessen wear and liability to side slip and puncture, by means of restraining cords or chains embedded in the cover]. J. Cockburn, Castle Mills, Edinburgh.

- 24,973 (1903). Heel protector. I. Watts, Great Grimsby, Lincolnshire.

- 25,000 (1903). Waterproofing composition for fabrics [made by melting paraffin or other wax with Almeida gum or Gutta-percha, and adding carnauba wax and refined resin oil; for insulating wires, carnauba wax is omitted]. V. B. Wright, Gresford, North Wales, and two others.



[ABSTRACTED IN THE OFFICIAL JOURNAL, MARCH 1, 1905.]

- 25,085 (1903). Pneumatic tire cover. R. and C. H. Wallwork, Manchester.
- 25,164 (1903). Pneumatic tire. A. Boguslavsky, London.
- \* 25,176 (1903). Elastic tire. W. N. Haring, Nyack, New York.
- 25,237 (1903). Truss for the heart [with pneumatic pads]. E. Abde, Bad Nauheim, Germany.
- 25,250 (1903). Vulcanite comb [of hollow back construction; illustrated in THE INDIA RUBBER WORLD, August 1, 1904—page 383]. Heinrich Traun, Hamburg, Germany.
- 25,274 (1903). Pneumatic tire [with flexible metallic puncture proof fabric within the cover]. E. Lapisse, El Boeuf, France.
- 25,297 (1903). Cycle handle [with pneumatic pads to lessen vibration]. A. A. Wade, Leeds.
- 25,299 (1903). Revolvable heel protector. F. H. Barker, Todmorden, Yorkshire.
- 25,329 (1903). Air cushion. B. Schwalenberg, Mannheim, Germany.
- 25,497 (1903). Hose fastening. E. Heywood, Todmorden, Yorkshire.
- 25,598 (1903). Pneumatic tire [with cover formed as a scroll in cross section and adapted to encircle the air tube two or more times]. F. F. Kerr, Liverpool.
- 25,600 (1903). Horseshoe pad. C. J. Fleetwood, London.
- 25,619 (1903). Nipple for nursing bottle. A. A. M. Couper, Johannesburg, South Africa.
- 25,645 (1903). Clamping device for pneumatic tires [to retain puncture patches]. A. J. W. Curry, Kimberley, South Africa.
- 25,656 (1903). Leather cover for pneumatic tires [to be attached by laces, buckles, bolts, or otherwise]. L. Nioré, Chateau Renault, France.

[ABSTRACTED IN THE OFFICIAL JOURNAL, MARCH 2, 1905.]

- 25,712 (1903). Ear appliance [to correct outward and forward curvature]. C. J. W. Simpson, Nottingham.
- 25,720 (1903). Machinery belts [woven of wire and provided with rubber or leather edge strips]. C. K. Sagar, Pendleton.
- 25,767 (1903). Vehicle tire [composed of leather bands, with or without interposed bands of rubber, and attached to wooden rims]. C. J. Pigeon, Paris, France.
- 25,973 (1903). Tool for tapping India-rubber trees. [The general principle of construction is shown in an illustration in THE INDIA RUBBER WORLD, March 1, 1903—page 192. There is, besides, a stabbing point for making the first incision in the tree.] Eastern Produce and Estates Co., Ltd., London, and Colombo, Ceylon.
- 26,133 (1903). Device for attaching or removing pneumatic tires and covers. C. Andrevert, Ivry-Port, France.
- 26,134 (1903). Air compressing device for pneumatic tires [operated by the rotation of the wheel]. P. J. McGinn, Bulawayo, South Africa.
- 26,178 (1903). Exercising glove or hand developer [comprising elastic bands]. L. J. Bingham, London.

[ABSTRACTED IN THE OFFICIAL JOURNAL, MARCH 2, 1905.]

- 26,308 (1903). Heel protector. E. J. Price and T. Carey, Cardiff.
- 26,351 (1903). Vehicle wheel. [To prevent side slipping two similar wheels are bolted together co-axially to form a double wheel; provided with ball bearings and rubber tires.] J. L. B. Templer, Aldershot, Surrey.
- 26,401 (1903). Overshoe. [To cover the upper of a boot only; a stiffened rubber or metal wire edge secures it to the sole.] R. J. Footner, West Didsbury, Lancashire.
- 26,521 (1903). Means of attaching rubber tires to wheels. [Wire staples are driven into the felloe.] J. Sloan, Belfast.
- 26,598 (1903). Repair band for pneumatic tires. G. E. Osborne, Birmingham, and S. Feast, London.
- 26,624 (1903). Sponge rubber insertion for pouncing pads for use in hat making. R. Robinson and Turner, Atherton & Co., Manchester.
- 26,789 (1903). Fountain pen. J. Balog, Vienna.

PATENTS APPLIED FOR—1905

Specimens of these patents, as published in the Official Journal of the United States.

2255. James A. Swinehart, London. Elastic tire. Feb. 4.
5249. F. M. Miller, London. Soft tread horseshoe. March 13.
5927. F. W. Bowly and D. J. Runyan, Washington. Automatic tire. March 21.
5965. W. R. Sine and J. S. Rosenthal, London. Improvements in the manufacture of rubber. March 21.

## THE GERMAN EMPIRE.

PATENTS GRANTED.

- 152,868 (Class 85e). Appliance for closing pipes, channels, etc. Gummi werk Wundt, Offenbach a/M. March 15.
- 160,188 (Cl. 63e). Elastic tire. R. Bell, Dumfries, Scotland. March 22.
- 160,120 (Cl. 39b). Process for making a substitute for Caoutchouc. Dr. H. Spatz, Schoenberg. March 22.
- DESIGN PATENTS GRANTED [GEBRAUCHSMUSTER.]
- 241,772 (Class 392). Apparatus for dipping and vulcanizing rubber goods. Phil. Penin, Gummiwaaren-Fabrik, A. G., and Frau Heinrich Schirmer, Leipzig. Feb. 15.
- 243,677 (Cl. 56a). Rubber chin chain having a metallic insert. G. Knetsch, Cologne. Feb. 22.
- 243,493 (Cl. 71a). Laced shoe with elastic side gores and means of clamping the lace ends on the side. J. Glass & Co., Breslau. Feb. 22.
- 243,595 (Cl. 73e). Toothed rubber stroker for painters' use. A. Heuer, Hannover. Feb. 22.
- 243,967 (Cl. 81e). Rubber machinery belts provided with outer layer of asbestos. Mannheimer Gummi-, Guttapercha- und Asbest-Fabrik, Mannheim. March 1.
- 245,009 (Cl. 15d). Covering for rollers consisting of layers of woven wire imbedded in hard rubber. Etablissements Hutchinson, Mannheim. March 15.
- 245,378 (Cl. 30g). Nipple for nursing bottle. Frau Ed. Weickum, Mannheim. March 15.
- 244,930 (Cl. 63g). Protector for pneumatic tires. A. Herrmann, Beckum. March 15.
- 245,300 (Cl. 30d). Body band of elastic material. Dr. R. Weissman, Lindenfels. March 22.
- 245,578 (Cl. 42f). Sediment burette, with rubber hood for pressing out the lowest drop of the sediment. Mrs. B. B. Cassel, Frankfurt o/M. March 22.
- 245,437 (Cl. 47g). Revolvable hard rubber closing device for automatic ball cocks. G. Bader, Königshütte o/S. March 22.

PATENTS APPLIED FOR.

- 20,270 (Class 63e). Air tube with textile reinforcement for pneumatic tires. E. Lange, Gotha. March 8.
- 19,389 (Cl. 63e). Elastic tire with cross ribs on the tread surface. L. P. Faison, Golconda. March 22.
- 38,320 (Cl. 63e). Resilient protective tread for rubber tires. C. A. Brackelsberg, Düsseldorf. March 1.

## THE FRENCH REPUBLIC.

PATENTS ISSUED (WITH DATES OF APPLICATION).

- 347,701 (Nov. 7, 1904). W. C. Hawtin. Rotative boot heel and method of attaching same.
- 347,633 (Nov. 4). Société Dufour Jeune et fils. Anti skidding pneumatic tire tread.
- 347,749 (Nov. 9). P. Herzberg. Dress shield.
- 347,766 (Nov. 10). E. B. Killen. Pneumatic tire.
- 347,860 (Nov. 12). R. Fournier du Poy. Treatment for India-rubber producing plants.
- 347,866 (Nov. 12). H. Garnier. Anti skidding tire.
- 347,890 (Nov. 16). Société Goud, Berlioz & Co. Anti skidding tire.
- 347,981 (Nov. 17). Société La Glycoline. Process for manufacturing flower tubing of a chemical substance.
- 347,974 (Nov. 16). G. Couston. Hermetically tight waterproof trousers.
- 347,933 (Nov. 15). G. F. Butterfield. Apparatus for vulcanizing and attaching leather soles to rubber shoes.
- 347,992 (Nov. 17). Société Bardou, Clerc et Co. et Desouches. Anti skidding cover, for pneumatic tires, made of rope or cable.
- 347,977 (Nov. 17). G. et H. B. de la Mathe. Pliable elastic cord or cable.
- 347,943 (Nov. 18). H. C. Bouet. Artificial India-rubber.
- 348,114 (Nov. 14). Bardet. Elastic tire.
- 548,257 (Nov. 25). M. Lamy. Anti skidding device for tires.
- 348,263 (Nov. 25). Otto Jeune, L. E. Otto et W. W. Bennett. Anti skidding device for tires.

Specimens of the publications of French patents may be obtained from the French Patent Office, Avenue de Villiers, Paris, at 50 cents each, post paid.]

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## THE RUBBER PLANTING INTEREST.

## AN AMERICAN ON CEYLON RUBBER.

A RECENT visit to Ceylon by Mr. F. F. McClintock, a representative of Messrs. George A. Alden & Co., crude rubber importers of Boston, Massachusetts, to report to his firm on the prospects of the supply of rubber from the plantations of *Hevea* in the Far East, is referred to at length in *The Times of Ceylon*, which prints an interview with Mr. McClintock. Some extracts from this gentleman's statements to the Colombo newspaper follow, in a somewhat condensed style:

My firm have sent me to Ceylon to report on the stability and future possibilities of the *Hevea*, which you have apparently so successfully transplanted from the Amazon, and to study what scientific cultivation and intelligent gathering and curing can accomplish. This painstaking care has already made its influence felt in distant lands, and I can show you a sample of Ceará rubber, as formerly shipped, without regard to the dirt and bark contained, as well as a sample of recent shipments in which greater care has been exercised,\* due, I am convinced, to the success attending your own efforts to get the best results.

This Ceará rubber will not and never can compete with *Hevea*. They are quite unlike in toughness and elasticity, and in this connection I cannot too strongly impress upon your planters the desirability of increasing their acreage. A glut of fine Pará rubber is quite as impossible, it seems to me, as an overproduction of gold, and prices must be maintained and even advanced with the steadily increasing demand.

America has a reputation, I believe, of wanting the best, and a disposition to pay for it, and at home we find the Pará rubber the best and therefore the cheapest. But 75 per cent. of all the African Congo and 50 per cent. of the Benguela rubber is sold in America.

Ceylon rubber commands a higher price than the fine Pará rubber from Brazil, not because it is better or stronger, but because you have collected and dried it with so much care. Your Ceylon rubber shrinks but 3 per cent. against an 18 per cent. shrinkage of Upriver and 20 per cent. of Islands fine, from the Amazon. At the same time, the quantity of Ceylon rubber so far received in America is so small, and its possibilities so unknown, that our large manufacturers have not used it commercially, as it would necessitate a change of formula or perhaps a change of machinery to introduce it; and until they are assured that a constant supply in sufficient quantities is available they are not likely to become important users; yet there are many smaller factories to whom the Ceylon product is a boon. Because of the absence of moisture it is ready for immediate use, and the time gained in this way permits quicker returns from their manufacture.

In some of the shipments of Ceylon rubber we find a considerable difference in strength, but whether this is due to the acetic acid which I understand you use to accelerate the coagulation, or because the *latex* is from immature trees, I am now unable to say. I have bought samples showing this difference.

I notice that it is all Pará rubber in Ceylon. I am glad of it. Pará rubber is the thing for you. There are all sorts of precious stones, but none are equal to diamonds. Pará rubber is the diamond among rubbers. There is an impression in Ceylon that the Pará rubber produced here is the finest in the world. That is a mistake. Some Ceylon rubber is as good as the best, I admit, but it is no better. The advantage of your rubber is simply its dryness, and there is no doubt it is a very desirable rubber.

Referring to the samples mentioned by Mr. McClintock, *The Times* says: "He had two biscuits, of practically the same thickness, of Ceylon 'Pará' rubber. One was so tough that it could hardly be stretched; the other could easily be torn by the finger. As Mr. McClintock points out, he is desirous of

learning what causes the difference in the two biscuits." *The Times* reproduces at length some statistics supplied by Mr. McClintock, showing that, while the United States import so largely the other grades of rubbers mentioned in his interview, they also take more than half the exports from the Amazon, as this condensed statement will show:

YEAR.	America.	Europe.	Total.
1902 .....	12,588	12,690	25,270
1903 .....	13,890	12,690	26,580
1904 (11 months).....	12,430	10,180	22,610
Total.....	38,900	35,860	74,760

Meanwhile the United States imported via Europe 1210 tons of Pará rubber in 1902; 1412 tons in 1903; and 898 tons in 11 months of 1904.

## A TEST OF CEYLON RUBBER.

*THE Times of Ceylon* prints a report made by a Scotch rubber manufacturer on a sample of Ceylon rubber, in which the following appears:

I carried out experiments to determine the respective merits of Malay States and Ceylon biscuits, as compared with Brazil Pará. Taking strips of each 3 inches long by  $\frac{1}{4}$  inch square, and with a load of  $7\frac{1}{2}$  pounds, the following elongations took place: Malay States,  $9\frac{1}{4}$  inches; Ceylon,  $10\frac{3}{4}$  inches; Brazilian Pará,  $13\frac{1}{2}$  inches: so that you will see that the Brazilian Pará is much superior to either of the other two. There is not much difference between the Ceylon and Malay, though the former shows up better.

While such test is interesting, it is by no means conclusive as a record of the comparative value of the three types of rubber. A much more valuable—and indeed the final—test would be in compounding and vulcanizing each of the three grades under varying conditions, and making tests of resiliency, etc.

## CEYLON AND MALAY STATES NOTES.

*THE Times of Ceylon* [March 10] reports: "It is believed in many quarters that Sir Thomas Lipton has become largely interested in Ceylon rubber estates, and there is no doubt that a large scheme is on foot to take up a very large block of land, probably considerably over 10,000 acres, in the Kelani Valley and other parts of the Low Country, for purposes of rubber cultivation. The local market for rubber shares is firm and there is no reason to doubt the public confidence continuing."

A later report refers to the formation of the Grand Central Ceylon Rubber Co., Limited, with a capital of 3,000,000 rupees [= \$1,000,000, gold], fully subscribed, to take up and develop a large tract in the Kelani valley, of which 1000 acres is understood to be practically all under rubber, including 200 acres 3 to 4 years old. It should be added that one half the share issue is taken by the vendors in chief payment, and that only 50 per cent. on the shares allotted to the public is being called up. The chairman of the company is the Hon. J. N. Campbell, and Carson & Co., of Colombo, are agents and secretaries.

The Seremban Estate Rubber Co., Limited, have accepted an offer of 4.75 rupees per pound [= \$1.54] for their 1905 crop, estimated at 20,000 pounds, delivered at the Colombo wharf. This is considered equivalent to 7 shillings in the London market. The Seremban company was formed in Ceylon in 1903, to acquire an estate in the Federated Malay States, on which there are now over 400 acres of rubber 7 and 8 years old. Sales of the 100 rupee shares of the company have been made recently at Colombo at 270 rupees.—The 1905 crop of Halwatura es-

\* Probably plantation "Mam-ba," from Oama, Brazil. For Is. R. 1000.



tate, in the Kalutara district, estimated at 4000 pounds, has been sold at 4.50 rupees [= \$1.46.]

W. P. Metcalfe, well known in Ceylon as a leading planter and later one of the pioneers of rubber cultivation in the Federated Malay States, is mentioned by the *Times of Ceylon* as having returned to England after 30 years residence in the Far East, in the belief that, having brought 260 acres of rubber to bearing, he can now afford to give up work for the rest of his life. Mr. Metcalfe estimates that between 70,000 and 80,000 pounds of rubber will be produced in the Malay States this year and he has no fear of overproduction, at least for a long time to come.

The Pelepah Rubber Co., Limited, has been formed, with the equivalent of \$100,000 capital [= \$50,000, gold] to acquire 600 acres of virgin jungle, on the Pelepah river, in the state of Johore, on a 99 years lease, and plant it to Pará rubber. It is expected to plant 100 acres this year—200 trees per acre—and at about the same rate hereafter, the capital being called in as needed for development work. There having been no promotion fees, the land costing practically nothing, and the superintendence to be practically without expense—the company being composed of persons having incomes from other sources—the hope is entertained of very liberal returns on the capital. J. G. Boyd is secretary, and the principal offices are in Singapore.

#### PLANTING IN SOUTHERN INDIA.

THE first annual meeting of the Rani Rubber Co., Limited [See THE INDIA RUBBER WORLD, May 1, 1904—page 272] was held at Colombo, on February 3. The report stated that the 214 acres of rubber already planted showed satisfactory results, and that during the year it was intended to 450 acres additional. The plantation is located in the native state of Travancore, in southern India, near the island of Ceylon.

Drummond Deane, writing from Travancore to a Ceylon paper, says that he has 40 acres planted to rubber 9 months and doing well, and is opening 120 acres more for rubber. Mr. Murphy has 120 acres planted 6 months and is opening 200 acres. H. M. Knight and H. S. Holder are also mentioned as planting rubber, in addition to the Rani Rubber Co., Limited.

At the annual meeting of the Travancore Tea Estates Co., Limited (London, March 15), Mr. H. K. Rutherford, the chairman, stated that their manager had planted a fair number of *Castilloa elastica*, but it was too early yet to say if this would be a success. Their part of Travancore was believed to be too high for planting Pará rubber. Mr. Rutherford is interested in several tea planting companies in Ceylon and the Straits that are planting Pará rubber on an important scale.

The 1500 shares of the Shaliacary Rubber Co., Limited, who own 673 acres in southern India, were allotted late in February, having been over applied for. The Colombo Commercial Co. are the agents and secretaries. The provisional directors are J. G. Wardrop, W. Shakespeare, A. A. Prideaux, and G. N. Thomson.

#### THE NAHIKU RUBBER CO., LIMITED.

THE Portland (Maine) *Times* gives some details regarding the above named company, recently incorporated at Honolulu to form a plantation in the Hawaiian Islands. It appears that Robert H. Anderson, the manager and a director of the company, is a native of Portland, which city he left three years ago to study rubber cultivation in Mexico and Central America, after which he went to Hawaii with the intention of forming a rubber plantation there, and the Nahiku company is mentioned as the result of his efforts to interest Hawaiian capital in this business. Associated with him in the new enterprise—as sec-

retary of the company—is his brother, Wilbur A. Anderson, who, after being graduated from the Portland high school, took the full course at Amherst College, where he was for four years president of his class. In 1902 he took the examinations for teachers in the Hawaiian islands, and is now professor of mathematics and psychology in Ouha College, besides being president of the Honolulu Athletic Club. Last year Mr. W. A. Anderson was married to a young lady of Portland, and the *Times* presents a view of the handsome bungalow in which they live in the suburbs of Honolulu.

#### COLISEO SUGAR PLANTATION CO.

[Plantation "Rubio," Coatzacoalcas, canton of Manatitlan, state of Vera Cruz, Mexico. OFFICES: 408 Pabst building, Milwaukee, Wisconsin.]

INCORPORATED under Wisconsin laws, with \$200,000 capital. Own 5000 acres adjoining the National Tehuantepec railway, near Medias Aguas station, 60 miles from the Gulf coast. The first annual inspection was made in February by a shareholders' committee, who report that 250 acres of land had been cleared and 200 acres planted to rubber in the summer of 1904, part of which tract was also planted to corn, the first crop yielding 1200 bushels, worth 3½ to 4 cents (Mexican) per pound. A second crop of corn had been planted on the same ground, and the committee reported clearing in progress for the planting of 500 acres additional to rubber. While it is intended to plant sugar extensively, this has been postponed with a view to arranging for the sale of cane to a neighboring mill. Officers: A. W. Priest, banker, Appleton, Wisconsin, president and treasurer; D. C. Burdick, wholesale merchant, Oshkosh, vice president; E. A. Baker, attorney, Milwaukee, secretary. A. B. Coate is plantation manager.

#### THE TEHUANTEPEC RUBBER CULTURE CO.

[Plantation "Rubio," Coatzacoalcas, canton of Manatitlan, state of Vera Cruz, Mexico. OFFICES: 408 Pabst building, Milwaukee, Wisconsin. THE INDIA RUBBER WORLD, May 1, 1904, page 272.]

LAST year the report submitted by the official inspector chosen by the subscribers to the bonds of this company to visit Plantation "Rubio" was commented on in these pages for its definiteness and comprehensiveness. The report recently made by Mr. Theodore M. Bates, of Cleveland, who visited "Rubio" in a like capacity, is of the same general character. Regarding the acreage of the several plantings and camps, these figures are given:

Camp	Acres	Planted	Planted	Total
Loma Grande	412	205	167	724
Cerro Agua	503	122	84	709
Segundo Sembrado	164	0	..	224
San Victor	..	..	99	189
Santos Road	..	163	..	163
Total	1499	520	290	2309

Facts are given regarding the condition of the different plantings, a better appearance being made on the hillsides than in the lower levels, and the trees grown from seeds at stake being much further advanced than those transplanted from nurseries. Measurements of many trees were made to indicate the average size of the different plantings. A new system of weeding introduced by Manager A. B. Luther is more efficient and economical than the old. The introduction of Japanese labor proved unsatisfactory. The total days worked on the plantation proper was 215,699, and the expenditure for labor, supervision, and subsistence, \$349,279 90, Mexican—not including cost of permanent improvements, live stock, taxes and insurance, and salary of manager. The policy of the company is to devote its energies to planting rubber, except that about 3800 bushels of corn were harvested in 1904, and the second crop on the ground, seen by the inspector, was about half as large. This is for use on the plantation.

## THE LATEST RUBBER "GET RICH QUICK" SCHEME.

## AN INQUIRY.

TO THE INDIA RUBBER WORLD, NEW YORK.—*20-20-00* At the suggestion of one of your subscribers in this city, I write to enquire if you know anything about the Peru-Para Rubber Co., whose booklet is enclosed, and of which company the president of the Omaha Bee is vice president. Their stock is now offered for sale. - - - If you care to take time to glance over the booklet please say how the chances for success would appear to you if they have what they claim. - - - I would also like to know why the "Cudahy Para Co." failed. - - - Yours very truly,

S. S. WILLIAMS.

CHICAGO, ILL., APRIL 11, 1905.

## THE REPLY.

TO answer the last of these questions first, it is proper to state that the Para Rubber Plantation Co., to which Mr. John Cudahy, a reputable citizen of Chicago, was induced by misrepresentations to lend the use of his name as president, did not "fail." It was a fraud, pure and simple, and when the promoters had lined their pockets liberally, the "company" ceased to do business. Their business, by the way, never had any relation to rubber.

\* \* \*

ON the appearance in the Chicago newspapers of advertisements offering "75 per cent. dividends per month for life" to investors in the "Peru-Para Rubber Co.," THE INDIA RUBBER WORLD wrote to a reputable Western journalist whose name had been connected with the proposition, and who wrote in reply, regarding the active promoter's work: "His attempt to push the sale of stock by flaring frenzied finance advertisements met with prompt remonstrance at my hands, and has finally been forbidden by Dr. De Clairmont" (the president of the company). The promise of fabulous dividends, however, has continued to be made in letters from No. 79 Dearborn street, Chicago, the headquarters of the Peru-Para Rubber Co., though in less extravagant terms. For example, a letter dated April 14 promised \$9000 in dividends in the third year on an investment of \$1000. A letter from the same office dated April 15 promised \$3000 or more on stock of \$1000 *par value*.

It may be mentioned that the company referred to was incorporated under the laws of the District of Columbia, January 11, 1905, by Adolph De Clairmont, of Ohio, and C. A. Swan and R. C. Goodrich, of Washington city, the capital being stated at \$3,000,000. In August, 1904, Dr. A. De Clairmont was reported in despatches from Toledo, Ohio, to have just returned from London, where he had floated \$500,000 in Peruvian Rubber Co. bonds, having purchased from the Peruvian government a large tract of rubber forest. There is no mention of these bonds in the company's booklet, or in its advertisement offering \$10 shares at \$3½ up to April 5, and \$5 thereafter. The location of the company's property is stated to be bounded by the rivers Blanco, Calvez, and Yaquerana, in the department of Loreto, in northeastern Peru, being 5 days' journey by steam launch from Iquitos. These are not geographical terms familiar to us, but "Yaquerana" evidently is the river Javary, and a map before us indicates a small tributary of that river named "Galvez." We do not doubt, however, that a concession from Peru, in due form, is held by the Peru-Para Rubber Co., which was not the case with the Venezuelan proposition.

Various letters having been exchanged with members of this corporation, one was despatched from THE INDIA RUBBER

WORLD office which may be presented here as the best answer which can be made at this time to the above inquiry from Chicago. The letter follows:

DR. A. DE CLAIRMONT,

President and General Manager, Peru-Para Rubber Co.,  
No 826 Norwood Avenue, Toledo, Ohio.

DEAR SIR: Referring to your favor of April 8, suggesting that we indicate the passages in your Prospectus which appear to us open to criticism, we beg to state that, while we are not in a position to supply a model estimate of expenses and receipts for a rubber exploiting company in Peru, we do feel convinced that the booklet before us is not one to appeal to the intelligence of people interested in rubber for rubber's sake, as distinguished from selling shares in rubber working companies. In view of your invitation, however, we take the liberty of pointing out a few details in the pamphlet which might be amended, with the effect of gaining more respect for your proposition from the people who have had the most experience in commercial transactions in rubber during the past fifty years, though making it perhaps less attractive to the class reputed to be ready buyers of "gold bricks."

In the first place, "Fine Para" and "Coarse Para" are the product of the same tree—"coarse" being the residue after the preparation of "fine"—instead of being the product of two distinct trees, as stated in the report of Mr. George von Hassel, the "government engineer" quoted by you. We have not the pleasure of knowing who this gentleman may be, but in view of this statement we have no further interest in information from that source.\*

The average number of trees per acre (twelve) stated in your prospectus is largely in excess of what has been proved to exist over any large area, and the "minimum" of 12 pounds per tree is a larger yearly average yield than has been demonstrated in any commercial undertaking of which we know. In regard to the report by Dr. Lucien Morisse, made to the French government ("Le Caoutchouc du Haut Orenque,") it has never convinced us even of the existence of rubber in the region referred to by him, while as for his statement that he collected 110 pounds of "pure rubber" by tapping 912 trees in eight hours—he simply *lies*. He could as easily eat up four acres of Ohio farm lands, with all the improvements, while waiting for a train. Dr. Morisse's report, by the way, served as the basis for the prospectus of the "Para Rubber Plantation Co." swindle, which withdrew its stock from sale after being exposed by THE INDIA RUBBER WORLD in 1902.

It is doubtful if *estradas* embracing 100,000 rubber trees could be opened for \$2450, as stated in your estimate, which omits, by the way, to state the cost of necessary buildings, equipment for smoking, etc., and makes no mention anywhere of cost of superintendence. While cost of shipment to Iquitos is included, there should be added the further cost of transportation to the consuming markets, and selling expenses. Moreover, all your rubber will not sell at \$1.33 a pound in New York; only the best rubber in any shipment will sell at the extreme high figures. One other point to be made is that 100,000 pounds of rubber started from a *gomale* in Peru would hardly weigh more than 70,000 pounds on arrival at New York.

If you should feel interested in consulting the experience of

Dr. De Clairmont's letter to the editor of THE INDIA RUBBER WORLD, dated April 11, 1905, is published in the issue of May 1, 1905.



various largely capitalized companies formed in Europe to exploit rubber in the Amazon valley, we might refer to the Rubber Estates of Para, Limited, formed in 1898, with a capital of £350,000, which during their first year handled only  $8\frac{1}{4}$  tons of rubber and in the second year 58 tons, with the effect of so impairing their capital that they reorganized with only £37,500 capital, and leased their holdings to a native firm. Last year the company were pleased to be able to report a net profit of £100, as marking the turning point from a career of continual losses. Of course this, and the experience of a number of other companies, does not prove that large native rubber producing areas will not ultimately be brought under the control of ample foreign capital, under intelligent and profitable management, but such development must be of very slow growth,

instead of yielding "75 per cent. dividends per month for life"—practically from the beginning—as advertised by your company in the *Chicago Record Herald* of March 26, 1905. From detailed reports which have reached us from sources believed to be trustworthy, we should consider a new company fortunate which, starting with a good organization, should be able to market rubber from a newly developed property within a year.

This may not be exactly the reply which your letter was intended to elicit; in any event we are quite willing to have you submit it for corroboration to any important rubber importing house in New York or Europe. Yours very truly,

THE INDIA RUBBER WORLD.

NEW YORK, APRIL 17, 1905.

HENRY C. PEARSON.

## TROUBLES OF THE UBERO PLANTATION COMPANIES.

THE affairs of the Ubero group of rubber planting companies, with headquarters in Boston and formed to operate in Mexico, have been the subject of much unenviable comment during the past month. Following charges made by dissatisfied shareholders, the postal authorities issued a "fraud order," prohibiting the delivery of mail to two of the companies, and both are now in the hands of receivers appointed by the Federal courts. The concerns are the *Ubero Plantation Co. of Boston* and the *Consolidated Ubero Plantations Co.*, both incorporated under the laws of Maine. Thus far no criminal charge has been preferred, but only that the condition of the plantation properties has been misrepresented, and that much of the investors' money has been wasted in extravagant commissions to agents and administration expenses.

The Ubero enterprises had their inception at Indianapolis, at the hands of William D. Owen, an influential citizen who, after being twice elected secretary of state for Indiana, served three terms as a member of Congress. He was the author of the present national immigration law and later, as United States commissioner of immigration, secured the designation of Ellis Island, New York, as a landing station for immigrants. In Washington Mr. Owen became acquainted with the late Señor Don Matias Romero, minister (later ambassador) from Mexico, who was ever active in promoting investments of foreign capital in his country, and especially in plantations. Mr. Owen, becoming much interested, visited Mexico, in company with several other men of prominence in Indiana, including the chief justice and other state officials, bank presidents, and so on. As a result, a company was formed, land purchased, and the planting of rubber and other crops begun—this being one of the earliest undertakings of the kind financed in the United States. Cordial relations existed between the members of the company and President Porfirio Diaz, and a Mexican senator, Señor Tomas Moran, later became a director in the Owen enterprises.

First, 5000 acres of forest land were secured on the line of the National Tehuantepec railway, including the site of the present Ubero station, by purchase from the Real Estate Co. of Mexico, which held title from the government. Possession of this land was taken by the *Mexican Coffee and Rubber Co.*, incorporated under Indiana laws in 1898 by Mr. Owen and his associates, with \$75,000 capital authorized, in \$25 shares. On May 16, 1898, a young man named Frank L. Torres arrived at Ubero, as manager of the *Mexican Coffee and Rubber Co.*, and within a week had a clearing under way. The idea was to sell this land in small lots, to be developed for purchasers by the

company for a consideration, but this plan not proving popular, Mr. Owen and the same associates had incorporated in Indiana, in 1898, a second company, the *Ubero Plantation Co.*, with \$200,000 in shares, to which was assigned 1000 acres. The capital of the original company had been supplied by Mr. Owen and his friends; to secure funds for the second—the plantation company—the public was appealed to, and it was as agent for securing stock subscriptions that Ferdinand E. Borges first appeared on the scene.

Interest in "Ubero" was confined at first to Indiana, but the center of financial operations was gradually transferred to Boston, whither Mr. Borges went, to seek subscriptions of New England capital. Meanwhile more corporations had been formed, affording larger issues of shares for sale, and prospectuses described new plantations to be opened. The *Ubero Plantation Co. of Boston* was incorporated August 10, 1900, under the laws of Maine, with \$1,000,000 capital, in \$150 shares. Mr. Owen was on the board, and the Hon. E. H. Nebeker, a reputed wealthy citizen of Indiana, who had been United States treasurer, was advertised as the treasurer of the new company. The interest of important members of the rubber trade in New England was also enlisted. The prospectus stated that this company's tract adjoined that of the Indianapolis Ubero property, "and as it is under the same management it may be considered a part of Plantation Ubero." The Indianapolis company was now paying dividends—admittedly not from the rubber just planted, but from the sale of "short crops"—and this facilitated the sale of shares in the new company.

By 1902 the name "Ubero" was so widely known that the *Boston Herald*, on May 18 of that year, gave prominence to the following item of local news, accompanied by portraits:

Among the most distinguished of recent visitors are Mr. and Mrs. F. L. Torres, of Ubero, Mexico, who are visiting Mr. and Mrs. F. E. Borges, of Brookline. Mr. Torres is a prominent business man, being manager of the Ubero Plantation Co., of the city bearing the name. Mrs. Torres is the daughter of E. H. Nebeker, ex-United States treasurer. Aside from a renewal of their old acquaintance, their visit has a significance. Mr. Torres is at the present time conferring with Mr. Borges, who is perfecting plans for financing an enterprise involving the consolidation of 18 of the leading Mexican companies engaged in tropical agriculture.

On May 2, 1902, there had been incorporated, under the laws of Maine, the *Consolidated Ubero Plantations Co.*, with \$2,500,000 in shares and the authority to issue \$2,500,000 in bonds. The company was organized at Kittery, Maine, with a board composed of local lawyers, but after the conference referred to in the *Herald* they retired, and a new list of directors and offi-

cers was announced, being identical with those of the *Ubero Plantation Co. of Boston*. The basis of the \$5,000,000 of issues authorized by the consolidated company's charter was the collection of properties—presumably lots sold by the *Mexican Coffee and Rubber Co.* from its original 5000 acres—named as follows in a prospectus:

Mexican Coffee and Rubber Co.	Urbahns, Maxwell & McNeeley.
Private estate of W. D. Owen.	J. M. Taylor Development Co.
Texas Coffee and Rubber Co.	Kent, Macquire, Hand & Strohm.
Littell Plantation No. 1.	Ford & Company.
Littell Plantation No. 2.	Hackley & Company.
Bloomington Plantation Co.	Private estate of F. L. Torres.
Worrell Plantation No. 1.	Mutual Rubber Co.
Worrell Plantation No. 2.	Private estate of W. C. Doak.
Zaring Plantation Co.	Private estate of Oskar Dunweg.

The enterprise kept most prominently in the notice of investors of late has been the *Consolidated Ubero Plantations Co.* An imposing suite of offices was maintained at No. 89 State street, Boston, in charge of F. E. Borges, whose name appeared nowhere on the company's printed matter and who appears not to have been an officer in any Ubero company. He seems, however, to have been the most active spirit in the management, in New England at least, where the business was the sale of bonds of the Consolidated company—a bonus of stock being given with each \$500 bond sold, on the idea that after the redemption of the bonds, the property would vest in the holders of the capital shares. Favorable reports on the progress of the company were distributed from this office, and visitors were shown specimens of coffee and fruits, supposed products of the plantation while the young rubber trees were developing. *And dividends were paid.* F. L. Torres was for awhile prominently advertised as "general manager," at the head of the executive force at the plantation, but his name of late has dropped out of sight. *Ubero Plantation Co.* of Indianapolis appears never to have been under a different management from the Boston concerns.

\* \* \*

BEGINNING with a shareholders' meeting of the *Ubero Plantations Co. of Boston* in January last, dissatisfaction with the management of the company began to be expressed freely. Investors' committees were appointed in both companies and a detailed investigation of the properties in Mexico was ordered, this being made by W. L. Wadleigh, a former crude rubber commission merchant in Boston, and later a director in the Ubero companies, and John F. Browning, of Duxbury, Mass., an investor.

Their reports were made public about the first of April. Without going into detail, it may be said that the investigation showed a much smaller amount of development work done than the investors had been led to expect, and the value of the estates was very much less. The amount of planting was not what the contracts had called for, and the value of the crops was practically *nil* except as regards the growing rubber. Nothing was found by the inspectors to justify the statements always made that the liberal dividends paid by the two Ubero companies had been realized from the sale of products. Several meetings of investors were held in Boston at the call of various parties interested, and various committees were appointed at these meetings to take action in the matter.

On April 18, Jeremiah Smith, Jr., and Hugh W. Ogden, lawyers of Boston, were appointed temporary receivers for the *Ubero* company, on the application of B. S. Tolman and other investors, by Judge Francis C. Lowell, in the United States court at Boston, and on April 21 Jeremiah Smith, Jr., was appointed temporary receiver for the *Consolidated* company, on application of Edwin O. Childs and others. These appointments afterward were made permanent.

From various statements made in the legal proceedings, or appearing in the Boston newspaper reports of investors' meetings, it seems that the books of the *Consolidated* at one time showed subscriptions for \$2,300,000 of the bonds, but as many subscribers on the installment plan failed to keep up their payments they were dropped from the list. It is estimated, however, that \$1,500,000 has been collected. The company has paid 6 per cent. interest on the bonds and 3 per cent. on the stock given as bonus to buyers of the bonds. It is alleged that shares in the *Ubero* company to the amount of \$578,000 were sold to about 900 persons, about 400 of whom bought shares outright, for \$295,000. It is alleged that of the money taken in \$326,000 was paid to *La Puerta Plantation Co.*—W. D. Owen, president—and \$123,000 in commissions on sales of stock. A motion for the appointment of a receiver for the *Ubero* company pending in the Boston superior court at the time of the action by the Federal courts was withdrawn.

It is understood that the investors will insist upon the cancellation of the contracts with the inside "development" companies, and that the properties be taken possession of by the two companies in which their money was placed. This may prove an intricate problem, since the various corporations, parties to the several contracts, are organized in different states, and the real properties situated in a foreign country, while the master spirit in the financial management is not a responsible officer of any of the companies named.

The *Chicago Evening Post*, in an editorial, thus aptly describes the "Ubero" financial system: "The promoters - - managed to have other companies organized before the time for paying the large dividends that had been promised to the stockholders of the first company. Then the money received from the sale of the stock in the second company would be used to pay dividends to the stockholders of the first. And when the time for dividends in the second company arrived, a third company would be organized to furnish the second company's dividends; and so on, till the scheme was exposed and the Federal authorities broke the chain."

\* \* \*

THE postal authorities at Washington on April 10 gave a hearing to representatives of the *Ubero Plantation Co. of Boston* and the *Consolidated Ubero Plantations Co.*, a writ having been issued, on evidence submitted by postoffice inspectors, commanding them to show cause why a "fraud order" should not be issued against them. The defense was argued ably, but without avail, an order being issued on April 17, directing the postmaster at Boston not to deliver any mail to the two companies, or to pay any money orders drawn in their favor. All mail directed to them was to be returned to the senders, stamped "Fraudulent." The case was directed by the assistant attorney general for the postoffice department, whose memorandum recites:

The plan of Owen and Borges, in both of these companies, was to secure the names of prominent men to create an appearance of stability and then, by alluring literature and the payment of fraudulent dividends, to give the scheme the appearance of a profitable enterprise. The development work done at the plantation was solely for the purpose of misleading visiting directors and investors. All the funds of the company, which would of course have to be used for the purpose of purchasing the land and developing the property, were diverted to the pockets of the promoters through the medium of selling companies, who also undertook to develop the property. As the properties were not developed and not even transferred to the other companies, investors to-day have nothing to show for their money.

The receivers appointed for the two companies at once took steps to have this fraud order vacated, on the ground that as appointees of the Federal courts they were to be considered as



representatives of the government, and entitled to be entrusted with mail addressed to the companies whose assets had been placed in their charge.

#### PEDIGREE OF THE UBERO COMPANIES.

##### I.

**MEXICAN COFFEE AND RUBBER CO.**—W. D. Owen, president. Incorporated in Indiana with \$75,000 capital; W. D. Owen and his stepson, Henry A. Luce, held about \$50,000, represented mainly by land (5000 acres) which they put into the company. Capital increased later by \$10,000, which sum was paid to Owen on his claim to have spent that amount for the benefit of the company. The land was conveyed to—

a. **Ubero Plantation Co.** (Indianapolis)—W. D. Owen, president—an Indiana corporation with \$200,000 capital, which the public was asked to subscribe in part. This company took 1000 acres; consideration not reported, except that \$200,000 was to be paid to the parent company for development work during 5 years prior to the final transfer, and this condition is said to have been met.

b. **The Tropical Sureties Co.**—W. D. Owen, president—a Maine corporation; \$400,000 capital, of which W. D. Owen held \$200,000; Luce, his stepson, \$80,000; Charles T. Crocker, of Massachusetts, \$100,000 (for which he is said to have paid cash); small holdings, \$20,000. The consideration for the land taken was \$300,000 in bonds of the *Consolidated Ubero Plantations Co.*—W. D. Owen, director—the sale of the bonds being guaranteed. An additional \$140,000 in bonds (sale not guaranteed) allotted to holders of some minor tracts previously sold by the Mexican Coffee and Rubber Co.

#### ASSETS OF THE COMPANIES DEALING IN BONDS.

Mexican Coffee and Rubber Co. . . . .	\$300,000
Holders of small plantations. . . . .	140,000
Tropical Sureties Co.—For developing plantation. . . . .	360,000
Tropical Sureties Co.—Commissions on sale of stock . . . . .	500,000
Tropical Sureties Co.—Profit. . . . .	1,200,000

Total. . . . . \$2,500,000

**[The Consolidated Ubero Plantations Co.]**—W. D. Owen, director—incorporated in Maine, with \$2,500,000 capital, in shares to be allotted to the holders of the bonds, the shares to control the property after the maturity of the bonds. The development work on the Consolidated plantations to date has been done by **The Tropical Sureties Co.** under contract. The land on which the bonds are based amounts to 6267 acres—including something more than what was acquired from the Mexican Coffee and Rubber Co. Mr. Wadleigh in his inspection report speaks of the Private Estates above mentioned as 800 acres, partially planted, and now "valueless."]

##### II.

**THE UBERO PLANTATION CO. OF BOSTON**—W. D. Owen, director—incorporated in Maine, August 10, 1900, with \$1,000,000 capital. Contracted to purchase for \$750,000, payable in installments, 3000 acres from—

**La Puerta Plantation Co.**—W. D. Owen, president—incorporated in Indiana, July 24, 1900, with \$150,000 capital, which undertook to plant and develop the property for 50 months before transferring the land. The work of development was sublet to—

**La Puerta Development Co.**—W. D. Owen, president—another Indiana corporation.

[Another contract for certain planting was entered into with a Mexican firm by W. D. Owen, as "managing director" of *The Ubero Plan-*

#### THE CONNECTION WITH THE UBERO COMPANIES.

THE connection with the Ubero companies of two gentlemen prominent in the rubber trade, one as president and the other as vice president, while primarily their own affair, nevertheless arouses a certain amount of interest and comment. As both are men of position and integrity, and far removed from the class who attempt to profit by the folly of unwise investors, the following statement seems in order.

Back in 1900 much less was known about the planting of

*Castillea* rubber than is known now. Many honest men more or less familiar with the tropics entertained opinions regarding the possible yield and profits which have not been justified by experience, and it was not then appreciated that plantation management was nearly 90 per cent. of the problem. The development of the Ubero enterprises as recorded in the preceding columns involved the sanction of many reputable men, and the distribution of dividends by the companies first formed indicated to outsiders that the planting business was profitable.

About November, 1900, after the promotion of the *Ubero Plantation Co. of Boston*, and the contract with *La Puerta Plantation Co.* to develop the property, to which the Old Colony Trust Co. (Boston) was a party as trustee, Mr. Owen succeeded in securing Arthur W. Stedman as president and Fred C. Hood as vice president, the salary of each to be \$1000 a year, and to each was issued 67 shares of Ubero stock and 400 shares in the development company. Prior to the acceptance to these offices and the issuance of the stock Messrs. Stedman and Hood procured the services of Frederick L. Bardwell, professor of chemistry in the Massachusetts Institute of Technology, who went to Mexico and examined the plantation properties, and came back with a glowing report. It is nothing against this estimable gentleman that he gave such a report, which undoubtedly he did in all honesty. He was not familiar with tropical propositions, and in view of the wonderful luxuriance of the region he visited, the apparent richness of the soil, and the fact that everything seemed to grow without effort, it is probable that had the gentlemen who sent him down there, or indeed had any other rubber manufacturer, gone on the same errand the report would have been equally favorable. Messrs. Stedman and Hood attended the meetings and worked in the interest of the company, accepting in good faith the reports made from time to time by inspectors chosen by the shareholders, and by Mr. Owen himself.

Upon the formation of the *Consolidated Ubero Plantations Co.*, two years later, Messrs. Stedman and Hood accepted the same offices in it that they held in the *Ubero Plantation Co. of Boston*, receiving each a salary of \$1000 a year and \$10,000 worth of bonds and 2000 shares of stock. Apparently everything was all right until the latter part of 1904, when, President Stedman's suspicions being aroused, he consulted a lawyer, upon whose advice he refused to pay any more money to the development company, and after a little more investigation he and Mr. Hood turned over all of their stock and bonds for the benefit of the investors. He also sent Mr. Wadleigh, a shareholder and director, to go over the property of both companies and report fully on the conditions there. As a result of these reports Mr. Stedman took the initial steps toward having the contract with *La Puerta* company canceled as a means to realizing as much as possible on the large sums that the investors had put in.

The pressure of Mr. Stedman's work in this connection had made him very nearly a nervous wreck, and his physician ordered a rest. He, therefore, resigned from the presidency temporarily, leaving as a substitute Mr. C. W. Rider, and went to Europe, both for the benefit from travel and to seek an interview with Mr. Owen, who had been for a considerable time abroad. As this paper goes to press Mr. Stedman is on his way home. It is understood that he will resume the presidency if the majority of the shareholders desire it, but if they prefer some one else he is more than willing to resign. Mr. Hood has also resigned.

This is not an apology, nor is it an inspired explanation. It is simply the way in which the Editor of THE INDIA RUBBER WORLD sizes up the connection of the two gentlemen named

with the Ubero companies, nor does he hesitate to affirm his confidence in their absolute sincerity. Had the land, even if not of the best, been planted with rubber, there would have been to-day millions of trees, and their value in a very few years would have been great. As it is, with 358,000 trees at Ubero and 293,000 on the Consolidated properties, if the stockholders should put a caretaker on the property and wait three or four years, they might get something back.

#### UBERO PLANTATION CO. (INDIANAPOLIS).

ON April 3 Judge Carter, in the superior court at Indianapolis, appointed the Union Trust Co. receiver for the Ubero Plantation Co.—the Indiana corporation—on the petition of Charles L. Nordyke, owner of 11 shares of stock, on the ground that the company had been mismanaged; insolvency was not alleged. The application was not opposed, but it was stated that the company had become temporarily embarrassed through the failure of the Mexican Traders' Co. to carry out its part in certain contracts.

At a meeting of shareholders at Indianapolis on April 20 a vote of confidence was given to the directors. Secretary O. M. Fowler stated that there had been some mismanagement, but that the situation was not serious. There remained \$16,000 of treasury stock, of which \$4,000 was subscribed for by those present to provide funds for carrying on work which had been stopped by the appointment of a receiver.

Ubero Plantation Co. was incorporated in Indiana in 1898, with \$200,000 capital, to acquire 1000 acres from the Mexican Rubber and Coffee Co., the latter company agreeing to clear and cultivate the land for five years, for which service it was to receive \$200,000. This contract expired in November, 1903, when the land was turned over to the Ubero company. Originally the official lists of the two companies were identical; William D. Owen, president; Nat U. Hill, vice president; A. C. Daily, treasurer; Judge U. Z. Wiley and William I. Overstreet, additional directors.

#### DR. C. O. WEBER AND SYNTHETIC RUBBER.

[FROM "THE INDIA-RUBBER JOURNAL,"]

IN some of the memoirs of the late Dr. Weber the statement has been made that it was his belief he would have "discovered" the synthetical manufacture of rubber within five years. From a fairly close acquaintance with Dr. Weber, we have little hesitation in saying that no such remark was ever made by him seriously. Certainly he knew too well the vicissitudes of scientific research ever to have put a time limit on his enterprise. Synthetical rubber has been "discovered" already, but the cost of manufacture is hundreds of times more than the present cost of rubber. What Weber's research was directed upon was the commercial synthetical manufacture of rubber. Not more than a year ago he confessed to us that he was as far off the solution of the problem as ever. While almost everything is possible to science, yet commercial possibilities present different problems. How keen was his hope, and how far removed was he from the near realization of it, could be estimated by the eagerness with which he threw himself into the investigation of many of the secret processes suggested by inventors.

THE Des Moines (Iowa) street car company have been sued for \$2500 damages, for injuries alleged to have been sustained by Mrs. Harriet C. Bancroft in slipping on the steps of one of their cars, her contention being that the company were negligent in not having the steps protected by treads of India-rubber or corrugated iron.

#### RUBBER NOTES FROM EUROPE.

##### AUSTRIA-HUNGARY.

THE Vienna firm, Josef Reithoffer's Söhne, have issued a circular to their customers in the following terms, in connection with a chart illustrating the rise in the prices of Pará rubber since 1902:

The chart going herewith shows the variation in the prices of our raw material, Pará rubber, during the past years and up to the present time. All unprejudiced persons must admit that our selling prices are not in accordance with the constant rise in the purchasing prices. The result is that we, as well as our competitors, are doing business at a loss. Two Austrian rubber works have already succumbed to the unfavorable conditions and are now winding up their affairs. An important loss of capital has been the result, and a considerable number of workmen and officers have lost their employment.

The instinct of self-preservation demands that we at last take the required measures for regulating our selling prices, and we therefore state that the prices and terms, both those accepted for previous orders, or quoted verbally or by letter, when not covered by our letter of acceptance of orders, are to be considered as not binding and that we are compelled to reserve the right of regulating our selling prices in each separate case.

##### GREAT BRITAIN.

THE directors of the Dunlop Pneumatic Tyre Co., Limited, have declared an *interim* dividend on the preference shares at the rate of 5 per cent. per annum for the six months ending March 31.

=British Insulated and Helsby Cables, Limited, report gross earnings for 1904 of £129,817. During the past year, the report says, the volume of trade has been large, but competition still continues very keen. Under these circumstances, the directors consider the result of the year's working satisfactory. Dividends of 6 per cent. were paid on the preferred share capital [£500,000] and 8 per cent. on the ordinary shares [£500,000], besides 4½ per cent. on the debentures [£500,000], these figures being the same as for the preceding year. Important additions to the company's works were made during the year.

##### NEW BRITISH PUBLIC COMPANIES.

CONTINENTAL Tyre and Rubber Co. (Great Britain), Limited; registered March 29. Capital, £10,000; object, to adopt an agreement with the Continental Caoutchouc and Guttapercha Co. (Hanover, Germany), and to manufacture and deal in pneumatic and other tires. Directors: Sigmund Seligmann, Adolf Prinzhorn, and Willy Tischbein. Registered office: 104-108, Clerkenwell road, E. C., London.

=London and Leicester Rubber Co., Limited; registered March 29. Capital £15,000; object, to take over the business of India-rubber manufacturers of Ambrose Foster & Co., Leicester, England.

##### GERMANY.

VEREINIGTE Hanfschlauch- und Gummiwaaren- Fabriken zu Gotha, Actiengesellschaft, with a capital of 1,800,000 marks [=£347,400] paid a dividend for their seventeenth business year of 6 per cent., against 7 per cent. in 1903. The report says: "The manufacture of pneumatic tires for bicycles and automobiles, taken up by us in the second half of the past year, has so far proved quite satisfactory. Our goods were favorably received, so that for the coming spring we were enabled to close out the larger portion of our production."

=Actiengesellschaft Metzeler & Co. (Munich) made at the recent International Automobile Exhibition at Berlin an extensive display of their pneumatic tires for automobiles and motorcycles, which was visited and specially complimented by his Majesty, the German emperor.



## NEWS OF THE AMERICAN RUBBER TRADE.

## MECHANICAL RUBBER MANUFACTURERS MEET.

THE regular meeting of the Mechanical Rubber Manufacturers' Association of the United States was held on April 6 at the Hardware Club, New York, President B. G. Work taking the chair at 10.30 A. M. The following companies were represented:

Boston Belting Co., Chicago Electric Hose Co., Combination Rubber Manufacturing Co., Empire Rubber Manufacturing Co., The B. F. Goodrich Co., Mechanical Rubber Co. (Cleveland), New Jersey Car Spring and Rubber Co., Pennsylvania Rubber Co., Republic Rubber Co., Revere Rubber Co., Voorhees Rubber Manufacturing Co.

Mr. J. J. Voorhees, of the Grievance committee, made the following report, which was unanimously adopted:

*Resolved*, That it is the sense of this committee that, in order to obtain proper recognition from the railroad classification committee, it must present our case in a concise and definite form, giving actual facts covering total amount of tonnage, amount of claims, and average value of each item considered.

In order to compile such a report, it is proposed to send to each member blank forms to be filled in, giving the desired information. It is felt that some members would not care to disclose these facts to competitors, and in order to obviate any feeling of this kind, it is proposed to employ a public accountant, such as The Audit Co. of New York, to gather this information from the different manufacturers and give to the committee the total result of the findings, it being the intention and understanding that the committee will receive no information whatever from the accountant regarding the reports received from any individual member, but simply the total of each item. For instance, the accountant's report will show the total amount of belting shipped by all manufacturers during 1904, the total claims made by all manufacturers, and the average value per pound of belting. Each item of sufficient importance will be covered in the same way, and with such a report your committee hopes to accomplish a definite and lasting benefit to the industry.

A report having been read from the Specification committee, Mr. Boyd offered this motion, which was adopted:

*Moved*, That the committee's report be accepted, and that they embody in their report the following: The government is to notify all bidders when tests are to be made; each bidder is to have the privilege of being present when the tests are made, both physical and chemical; also that the Mechanical Rubber Manufacturers' Association of the United States is to have the privilege of having a representative to witness all tests of mechanical rubber goods that are made by the government.

Mr. E. H. Garcin moved that the Specification committee be prepared at the next meeting to recommend a uniform machine or machines for testing mechanical rubber goods that are being made to specification.

The secretary, William Hillman, read a communication in relation to rubber prices from Mr. F. B. Knott, secretary of the India Rubber Manufacturers' Association of Great Britain, and was instructed to make a suitable reply. C. Edward Murray was appointed a member of the Grievance committee to succeed J. Oliver Stokes, and C. C. Goodrich on the Specification committee to succeed J. F. McGuire.

## CHICAGO HAS A RUBBER CLUB.

THE Chicago Rubber Club was organized on the evening of April 12, at a meeting of which notices had been sent to 27 concerns connected with the rubber trade in the city of Chicago, and it was voted that all the houses responding to such notice within 20 days should be enrolled as charter members. The object of the club is the promotion of more intimate social relations between the members. Any manufacturer or dealer

in rubber goods in Chicago may become a member by complying with the constitution and by laws and receiving a majority vote of the members present at any regular meeting. The membership fee is \$5, and the annual dues \$10. Meetings will be held on the second Tuesday of every alternate month, and each member may be represented by any number of proper officers or representatives, though no concern shall be entitled to more than one vote. The officers elected for the first year are:

*President*.—D. C. BLANCHARD, Mechanical Rubber Co.

*Vice President*.—FRANK E. MILLER, Gutta Percha and Rubber Manufacturing Co.

*Secretary*.—PAUL BLANCHARD.

*Executive Committee*.—John H. Kelly, Republic Rubber Co.; Frank Henderson, Manhattan Rubber Manufacturing Co.; E. H. Huxley, Boston Woven Hose and Rubber Co.

The next meeting will be held on the second Tuesday in June, and from the suggestions made at the meeting reported above it is expected that it will prove interesting and profitable.

## A PACIFIC COAST RUBBER ASSOCIATION.

THE Mechanical Rubber Goods Association of the Pacific Coast has been organized, with headquarters in San Francisco. The association has been established for the purpose of promoting good fellowship among its members and correcting as far as possible such abuses and annoyances in the mechanical rubber goods trade as affect all of its members and do not enter into the competitive features thereof. The firms eligible to become members of the association are those carrying stocks of mechanical rubber goods or representing mechanical rubber goods factories east of the Rocky mountains. The following companies are now represented in the membership, and applications are invited from other firms who may be eligible and have not yet become members:

Bowers Rubber Co., Boston Woven Hose and Rubber Co., H. N. Cook Belting Co., L. P. Degan Belting Co., Diamond Rubber Co., Dunham, Carrigan & Hayden Co., Goodyear Rubber Co., Gorham Rubber Co., Graton & Knight Co., Gutta Percha and Rubber Manufacturing Co., New York Belting and Packing Co., Limited; Pacific Coast Rubber Co., Pacific Hardware and Steel Co., Plant Supply Co., Revere Rubber Co.

At the first meeting of the association on March 11 the following officers were elected for one year:

*President*.—JOSEPH V. SELBY, western manager Boston Woven Hose and Rubber Co.

*Vice president*.—W. J. GORHAM, president Gorham Rubber Co.

*Treasurer*.—C. F. RUNYAN, Goodyear Rubber Co.

*Secretary*.—G. N. DIDION.

## UNITED STATES RUBBER CO.—DIVIDENDS.

THE regular meeting of the board of the United States Rubber Co., on April 6, resulted, as had been predicted, in restoring the preferred shares of the company to an 8 per cent. dividend basis. That is, after declaring a fourth quarterly dividend of 1½ per cent. out of the net earnings for the fiscal year ending March 31, a dividend of 2 per cent. was declared, making 8 per cent. for the year. The last year in which dividends amounted to 8 per cent. was 1899-1900. All dividends were suspended at one time, and beginning in April, 1904, quarterly dividends were declared at the rate of 6 per cent. a year. After the meeting of the board referred to, a statement of earnings was issued (March partially estimated) of \$3,751,776.62, out of which dividends of 8 per cent. have been declared, amounting to \$1,882,040, leaving a surplus for the year of \$1,869,736.62. This, it is stated,

is equal to 7.7 per cent. on \$23,666,000 of common stock, on which the last dividend was paid April 30, 1900. The earnings applicable to dividends for the preceding fiscal year were \$1,575,641.

The annual meeting of shareholders for the election of directors and for the transaction of any other business which may properly be brought before the meeting will be held at the registered offices of the company, at New Brunswick, New Jersey, on Tuesday, May 16, at 12 M. The transfer books were closed on April 25 and will be reopened at 10 A. M. on the day following the annual meeting.

#### AFFAIRS OF THE GOSHEN RUBBER WORKS.

THE action of a creditor of the Goshen Rubber Works (Goshen, Indiana), petitioning this concern into involuntary bankruptcy, reported in THE INDIA RUBBER WORLD [April 1—page 248], proves to have been, in view of the circumstances, unwarranted. Albert G. Harlin, who was appointed receiver, was discharged at the first hearing before the United States circuit court, it requiring but 17 minutes to have the case dismissed. THE INDIA RUBBER WORLD is advised that the company are solvent and always have been, and they claim that the controversy with the Chicago creditor could have been adjusted easily had the latter shown a spirit of fairness. The company appear to have been somewhat handicapped recently through a lack of working capital, but this has been supplied by an issue of \$80,000 in bonds, all of which was subscribed for by the shareholders. The company begin their new year without a dollar of indebtedness, and report good prospects for business. Mr. Arrah J. Whisler, formerly of the Kokomo Rubber Co., has been employed as superintendent, and the company's sales department has been reorganized and strengthened.

#### THE MANHATTAN RUBBER MANUFACTURING CO.

DATING from May 1 the general offices of this company will be located at the factory (Passaic, New Jersey), in order to facilitate the handling of their business. The company request that all correspondence to be addressed to them at Passaic. A stock of rubber goods will be kept on hand at No 18 Vesey street, New York, which premises will be retained as an important and fully equipped selling branch.

#### FIRE IN A BOSTON RUBBER STORE.

A FIRE which resulted from an unknown cause on the evening of April 7, in the rear of the rubber store of Prescott & Co., No. 27 Dock square, Boston, caused a loss of \$15,000. The damage was confined, however, to goods stored away for the summer trade and not now in demand, so that the firm were able to do business in seasonable goods the next morning, and by April 11 were in such shape that visitors to the store who had not heard of the fire saw no reason to suppose that one had occurred. The firm of Prescott & Co. was formed early in 1896 to deal in mechanical rubber goods, clothes wringers, carpet sweepers, and oil and gas stoves.

#### FIRE IN A BUFFALO RUBBER STORE.

THE firm of G. E. Thing & Co., wholesalers of boots, shoes, and rubbers, occupying a six story building, Nos. 37-39 Pearl street, Buffalo, New York, were burned out on the morning of April 1. The cause of the fire which started in the rear of the fourth floor has not been learned, and the delay in discovering it rendered it impossible to save anything in the building, though the firemen were able to prevent the spread of the flames to the neighboring buildings. The losses have been adjusted on the stock and on the building, which is under lease for a number of years, so that the firm hope to be ready for business in June. Meanwhile the business is taken care of through the

Rochester house of Lewis P. Ross, of which the Buffalo business is a branch. The firm is composed of G. E. Thing (who has been associated with Mr. Ross for 27 years), G. G. Ford, and L. P. Ross. The firm began business May 1, 1904, succeeding E. N. Neff, at the same location. Messrs. Thing & Co. are jobbers of the "Goodyear Glove" rubber footwear for Buffalo and vicinity, and having added the "Boston" and "Bay State" brands this season, they are in a shape to do a larger business than ever before. The company's loss has been estimated as high as \$200,000, the greater part being covered by insurance.

#### FIRE AT BEACON FALLS.

A FIRE broke out in the office of The Beacon Falls Rubber Shoe Co. about 1.30 o'clock on the morning of April 8, and was extinguished after two hours of hard fighting by the factory fire brigade. The office building is situated within a few feet of the mill, and the fire could very easily have done serious damage. The office will have to be practically rebuilt, with the exception of the outside walls. The loss is estimated at about \$9000, and is fully covered by insurance. The cause of the fire is unknown.

#### A RUBBER COMPANY'S PROTECTION AGAINST FIRE.

A FIRE which broke out in the varnish house of the Canadian Rubber Co. of Montreal—located in the center of the group of buildings comprising their extensive factory—about 9 A. M. on April 11, was extinguished by the company's fire brigade before the city firemen arrived with their engines. But for the prompt extinguishing of the flames the factory might have been very seriously damaged; as it was, however, the loss was slight. The Canadian Rubber Co. maintain two companies of well trained firemen chosen from their employes, and all the other male employes are instructed what to do in case of fire. Three fire reels, containing about 4000 feet of hose, are distributed about the plant, and an engine which pumps water direct from the river is kept constantly with steam up in order to be ready for use at a moment's notice. The rubber company's fire brigade has several times rendered valuable assistance at fires outside of the establishment.

#### THE RECENT FIRE AT MILLTOWN, NEW JERSEY.

REFERRING to the fire on the premises of the International Automobile Tire and Vehicle Co. (Milltown, N. J.), on March 21, reported in THE INDIA RUBBER WORLD [April 1—page 244], it may be added that the building destroyed was not, as reported in some of the newspapers, the original factory built and operated by the late Christopher Meyer. The original Meyer building was destroyed by fire in 1861, and the building burned in March was that erected immediately afterward and subsequently used by Mr. Meyer's company.—A portion of the building recently burned was leased by the International company to the Jersey Rubber Specialty Co., manufacturers of seamless rubber goods, who advise THE INDIA RUBBER WORLD: "Our factory burned out completely, and it will be some time before we will be in a position to fill orders. We expect, however, to be in the market within the next 60 days with a complete line of seamless rubber goods, such as toy balloons, rubber gloves, finger cots, nipples, and the like. We have not definitely decided as to the location for our plant, but the indications are that it will be in Milltown."

#### THE WIRE AND CABLE CO. (MONTREAL).

THIS company is engaged in the manufacture of bare copper wire, and weatherproof and insulated wires and cables, involving work in paper, lead, and rubber insulation. The company has hitherto purchased its rubber compound from the rubber factories in the Dominion, but has recently installed an equipment of washers, calenders, etc., for making insulating



compounds, which places it within the list of rubber factories. — The company has favored us with one of its books of tables, which is very comprehensive and well arranged, as well as being a handsome publication.

#### THE SWINEHART CLINCHER TIRE AND RUBBER CO.

THIS company was mentioned in our last issue as having acquired the factory of the Rubber Specialty Co. (Akron, Ohio), with the intention of manufacturing their own tires in future. The formalities attending the transfer of the property were concluded on April 4. The premises acquired include a three story brick building, with basement, 65 × 20 feet, well equipped with machinery. The company started grinding rubber on April 11. In connection with the patented Swinehart motor tires, the company expect to manufacture rubber tired truck wheels on a considerable scale.

#### THE MITZEL RUBBER CO. (CARROLLTON, OHIO).

THIS company has broken ground for a new building for use as a press room, 40 × 40 feet, for which they have plans completed and the material purchased. After this building is ready for use the entire factory will be rearranged, an additional number of presses being put in and new machinery installed. The company are understood to have been very successful in their new location, and to be preparing to take up some new lines of production for which still other new buildings will be required.

#### NO MERGER OF CANADIAN RUBBER COMPANIES.

THE INDIA RUBBER WORLD has the best authority for stating that there is no basis of fact for the recent published newspaper reports pointing to an amalgamation of the four largest rubber manufacturing companies in Canada.

#### NEW RUBBER INSULATED CABLE FOR MEXICO.

A CONTRACT has been awarded by the Mexican government to The Safety Insulated Wire and Cable Co. (New York) for the construction of a triplex double armored submarine cable, which is to be laid across the Terminos lagoon, near Yucatan, to connect with the government telegraph system of that province. This cable is being made under the same specifications as that made by the same company and now in operation between Vera Cruz, Frontera, and Campeche—a nine conductor cable, with India-rubber insulation, and 472 nautical miles in length. [See THE INDIA RUBBER WORLD, January 1, 1902—page 116.] The company are informed by the government that the former cable has been in continuous service, transmitting about 3000 messages daily, and in every way proving satisfactory. It is referred to as having been entirely free from trouble from the teredo, which has so greatly shortened the life of Gutta-percha cables in tropical waters.

#### THE CONSUMERS RUBBER CO. (BRISTOL, R. I.)

THIS company, the incorporation of which was reported in THE INDIA RUBBER WORLD last month [page 246] has been organized with Terrence McCarty president and treasurer, and Nathan W. McCarty secretary. The company has acquired the land and buildings and machinery formerly used by the Byfield Rubber Co., of Bristol, which will be known as factory No. 1, and used for the manufacture of insulated wires and cables. The new two story building on the premises will be known as factory No. 3 and devoted to the production of mechanical goods and sundries. The company has installed a new 300 HP. Harris-Corliss engine and added considerable new machinery. Sample goods have been produced since early in the month and some shipments have been made. — The Byfield Rubber Co. was incorporated September 10, 1897, and engaged principally in making rubber footwear, the production of which increased to 4500 pairs daily. The factory was closed in Novem-

ber, 1901. Terrence McCarty was general manager during this period and later was engaged for some time in the manufacture of rubber shoes on the same premises.

#### HARDMAN RUBBER CO.—ACCIDENT.

THE bursting of a 10 ton flywheel in the factory of the Hardman Rubber Co. (Belleville, New Jersey), on April 10, caused considerable damage, the repairing of which required the rest of the month. An auxiliary engine was uninjured, however, and all departments, with the exception of the grinding and callendering rooms, continued in operation. Assistance was at once tendered by two other rubber concerns, one in mixing stock and another in calendering, so that the Hardman company have been able to fill orders with very little delay.

#### NEW YORK STOCK EXCHANGE TRANSACTIONS.

##### UNITED States Rubber Co. :

DATES.	COMMON.			PREFERRED.		
	Sales.	High.	Low.	Sales.	High.	Low.
Week ending Mar. 25	13,200	43	40½	5,200	113½	110¾
Week ending Apr. 1	13,200	43¾	41¾	6,020	115¼	112
Week ending Apr. 8	10,700	45½	42½	13,800	118½	113
Week ending Apr. 15	6,100	44¼	43¼	2,744	117¾	116½
Week ending Apr. 20	6,500	44	41	2,900	117½	115¾

##### RUBBER Goods Manufacturing Co. :

DATES.	COMMON.			PREFERRED.		
	Sales.	High.	Low.	Sales.	High.	Low.
Week ending Mar. 25	62,400	31	25½	3,100	99½	95½
Week ending Apr. 1	71,110	35¼	29¼	8,300	109½	97½
Week ending Apr. 8	36,225	35¼	32½	4,025	109	104
Week ending Apr. 15	26,320	34¼	32¼	3,220	109	107
Week ending Apr. 20	17,900	33½	31	655	107½	106½

#### THE NEW CINCINNATI RUBBER FACTORY.

THE pioneer rubber factory of Cincinnati is expected to be in operation by midsummer. Reference was made in THE INDIA RUBBER WORLD of March 1 [page 212] to the negotiations, in charge of Mr. W. G. Brown, for the removal to Cincinnati of a rubber plant operated for a number of years by an important concern in another city. The company meant was the Whitman & Barnes Manufacturing Co., with whom Mr. Brown had been connected for several years. He had obtained an option on their rubber factory at Akron, Ohio, and on March 30 the option was exercised, a company having been formed in Cincinnati, with \$250,000 capital, full paid, for the purpose. The Cincinnati Rubber Manufacturing Co. has been incorporated under the laws of Ohio, and organized by the election of the following officers :

*President*—JOHN M. CRAWFORD, M. D.

*Vice President and General Manager*—W. G. BROWN.

*Secretary*—E. W. STRONG.

*Treasury*—S. D. BALDWIN.

*Additional Directors*—James Albert Green, Fred. A. Geier, Samuel Hillis.

Dr. Crawford was sometime United States consul general at St. Petersburg. Mr. Brown has been manager of sales of the Whitman & Barnes company. Among the shareholders is Charles P. Taft, publisher of the Cincinnati *Times-Star*. Plans have been drawn for a factory, and at last accounts it was thought that the site would be in Norwood, a suburb of Cincinnati. A number of the employes of the Akron factory probably will be transferred to the new plant.—The Whitman & Barnes Manufacturing Co. will continue the operation of their Akron works until August 1, when the final transfer will be made, and the company will go out of rubber altogether. President C. E.

Sheldon explained to THE INDIA RUBBER WORLD: "In the way of an explanation for making this change I would state that for the past two years we have been abandoning our branch house system for the purpose of dealing directly with the jobbers. Formerly our branch houses sold quite an amount of rubber goods; this led us into the manufacturing of same ourselves so that, doing away with the branch houses, there is no necessity for us to manufacture these goods as in times past. Another reason is that we are confining our manufacture to a line of machinists' supplies to a large extent and as you will readily see the rubber business is quite foreign to this line of goods." Mr. Sheldon asserted that the change was not due to any idea that there was no longer money to be made in the rubber industry. The Whitman & Barnes company established their rubber plant at Akron about eight years ago, and W. G. Brown, who had been with the Cleveland Rubber Works ten years; entered their employ at the beginning of 1902.

#### THE VOORHEES RUBBER MANUFACTURING CO.

VOORHEES Rubber Manufacturing Co. (Jersey City, New Jersey) have consolidated their New York sales office, hitherto at No. 150 Nassau street, and their vehicle tire department, at No. 303 West 54th street, in a new location, No. 54 Dey street, where, in larger premises than they have before occupied, they have opened a store with a complete stock of hose, belting, packings, valves, mats, and mattings, tubing, etc., and where they carry and apply the Voorhees solid rubber tire.

#### "ELASTIC COMPOUND."

WILLIAM H. SCHEEL, No. 159 Maiden lane, New York, an importer of high grade rubber substitutes, antimonies, colors, fillers, and the like, for rubber workers' use, has recently introduced what he calls an Elastic Compound, a high grade hydrocarbon, designed to be used by makers of mechanical goods, footwear, etc. It is a high grade product, uniform in quality. Formulas for the application of Elastic Compound and other products may be obtained by manufacturers upon request. Mr. Scheel has added gilsonite and mineral rubber to the list of goods supplied by him.

#### NEW INCORPORATIONS.

M. AND S. TIRE CO., April 12, 1905, under Massachusetts laws; authorized capital, \$200,000. Incorporators: Franklin G. Saylor, Franklin; Horace N. Smith, Salem; and George H. Blake, Concord—all of Massachusetts.

=The Cincinnati Rubber Manufacturing Co., April 8, 1905, under Ohio laws, to manufacture rubber goods; capital, \$250,000. Incorporators: W. G. Brown, S. D. Baldwin, Fred. A. Geier, J. M. Crawford, James A. Green.

=International Manufacturing Co., April 19, under Connecticut laws, to make and deal in rubber goods; capital (stated to be full paid), \$75,000. Incorporators: Lucius F. Robinson and Ralph O. Wells, of Hartford, and William B. Reid, New York city. The holders of the shares are: Lewis D. Parker, West Hartford, 187; Arthur S. Hyde, Hartford, 187; S. Terry Pollak, Mexico city, 187; W. B. Reid, 186; E. B. Redfield, L. S. Robinson, R. O. Wells, all of Hartford, 1 each. L. D. Parker is president and treasurer, and A. S. Hyde vice president and secretary. All the shareholders named are directors. Lewis D. Parker was for a number of years connected with the Hartford Rubber Works Co., of which he ceased to be president at the annual meeting on June 7, 1904. The Hartford newspapers have since reported the intention of Mr. Parker to sue that company for alleged abrogation of contract without cause.

=Amsterdam Rubber Co. (Nos. 105 107 Reade street, New York), March 30, 1905, under New York laws; capital, \$25,000. Incorporators: Edward R. Rice, Buffalo, N. Y.; Walter S. Ballou, Providence, R. I.; Charles W. Barnes, New York. Ob-

ject, to handle the products of The Joseph Banigan Rubber Co. in New York city and the surrounding territory. The Banigan Rubber Co. of Buffalo, the incorporation of which was reported last month, will handle the Banigan products in the territory of which Buffalo, New York, is the center.

=Case Chicle Co. (Rochester, N. Y.), April 7, 1905, under New York laws, to manufacture chewing gum; capital, \$200,000. Directors: Charles V. Case, William Horcheler, and Louis L. Williams—all of Rochester.

#### TRADE NEWS NOTES.

AT the annual meeting of shareholders of The Gutta Percha and Rubber Manufacturing Co. (New York), on April 5, the retiring board of directors was reelected, and subsequently the officers of the company were also reelected. No other business was transacted.

=The annual meeting of shareholders of the Manufactured Rubber Co. will be held at the registered offices of the company, in Camden, New Jersey, on Wednesday, May 10.

=The Republic Rubber Co. (Youngstown, Ohio), have filed a certificate with the secretary of state of Ohio, of the increase of their capital stock from \$400,000 to \$1,000,000, this increase having been rendered desirable by the recent growth of their business.

=The Apsley Rubber Co. (Hudson, Massachusetts) at last accounts were very busy in the footwear department, increasing the daily ticket of shoes and reemploying the boot makers who were recently laid off.

=The Fisk Rubber Co.'s factory (Chicopee Falls, Massachusetts) was closed for only a day and a half for the annual inventory, at the beginning of April.

=Iroquois Rubber Co.—F. C. Howlett, president—jobbers of rubber footwear and clothing, Nos. 43-45 Pearl street, Buffalo, New York, advise THE INDIA RUBBER WORLD: "The reports of the newspapers with reference to our having sustained loss by fire [on April 1] are erroneous. We have a very close call, but fortunately were not damaged at all. The fire started in the wholesale boot and shoe house of G. E. Thing & Co., two doors from us, but the firemen were able to control same before it reached us."

=The Globe Mills Rubber Co. (Lawrence, Massachusetts) have taken title to the property known as the Globe Worsted Mills from Leonard C. Moore, treasurer of the corporation, who recently purchased the same from the American Woolen Co. There are 1 $\frac{2}{3}$  acres of land; the principal mill building of brick, 200 × 50 feet, part two and part three stories; a smaller wooden building, and water power rights. It is understood that the first production will be tennis shoes, and that the making of rubber shoes will be begun in time to figure in next winter's trade.

=At a meeting of the Central Labor Union of Lawrence, Massachusetts, on the evening of April 12, communications were received from the various local labor organizations requesting the central body to see to it that the factory of the newly organized Globe Mills Rubber Co. was made a union shop.

=The uniformed base ball team of George Borgfeldt & Co. (New York) are ready for challenges. This team lost but one game during the entire season last year. Challenges may be addressed to Manager C. H. Norton, No. 48 West Fourth street, New York.

=H. B. Camp, president of The Faultless Rubber Co., is interested in the National Fireproofing Co., who are erecting a plant at Independence, Ohio, for the manufacture of underground electrical conduits, for which it is understood that a number of advance orders have been received, especially for exports to Europe.



=The Safety Insulated Wire and Cable Co. are making at their works at Bayonne, New Jersey, on an order from the United States government, 200 miles of rubber insulated submarine cable to connect Valdez with Seward, Alaska. Valdez is the present northern terminus of the new cable line from Seattle, Washington state, made by the Safety company and reported in THE INDIA RUBBER WORLD, November 1, 1904 [page 53].

=The Standard Underground Cable Co. (Pittsburgh, Pa.) have discontinued their agency arrangements on the Pacific coast, and established a Pacific coast branch in charge of Mr. A. B. Saurman, with offices in the Rialto building, San Francisco. There will be sub-sales offices at Los Angeles, California, and Portland, Oregon. The company's factory at Oakland, California (the only factory west of the Mississippi equipped with lead presses for cable insulation work), is reported to have been unusually busy for several months past.

=In the last thirteen days of March the Boston Rubber Shoe Co. shipped more than 42,000 cases of goods, which is a record few shoe companies have ever equalled and shows that "Bostons" retain their old time popularity.

=The Maine Rubber Shoe Co. (Portland, Maine), a corporation formed in 1904 to job rubber footwear, have voted to increase the number of directors from three to four.

=The Woonsocket Rubber Co. are to take out 8 boilers now in service at their "Alice" mill, at Woonsocket, and replace them with 7 new horizontal return tubular boilers, 18 feet 4 inches long and 72 inches diameter, to be built by the D. M. Dillon Steam Boiler Works (Fitchburg, Mass.). The mill will not be closed while the new boilers are being installed, which probably will be during the summer.

=It is reported that negotiations are in progress for the merger of the Mount Vernon-Woodberry Cotton Duck Co. (Baltimore) with the United States Cotton Duck Corporation.

=A large number of the boot makers of the Edgeworth factory of the Boston Rubber Shoe Co. are reported to have been transferred to the company's Fells factory in Melrose.

=Charles P. Kelly, formerly with Morgan & Wright (Chicago), but more recently on the executive staff of The Canadian Rubber Co. of Montreal as deputy manager of the Moulded Goods department, has been promoted by this prominent company to the position of superintendent of the Mechanical Goods factory.

=The Independent Rubber Co. (Fort Wayne, Indiana), wholesalers of rubber boots and shoes, handling the Hood Rubber Co.'s brands exclusively, have removed to larger quarters, No. 121 East Columbia street. They now have 13 salesmen on the road.

=Charles B. Raymond on April 24 became acting secretary of The B. F. Goodrich Co. (Akron, Ohio), with the title of assistant secretary. On account of the illness for the past year or more of Mr. R. P. Marvin, so long secretary of the company, he has not been able to have active charge of the office.

=The circuit court at Akron, Ohio, has affirmed the verdict of the common pleas court awarding to Addison McClurg \$1500 damages for injuries sustained while employed in the company's factory. McClurg won on the first trial, but a higher court reversed the verdict. A second trial resulted in a similar verdict, and the defendant based an appeal upon a count of alleged errors.

=Mr. John J. McGill, who has been identified for years with the rubber industry in Canada, has become connected with the management of The Durham Rubber Co., Limited, of Bowmanville, Ontario, who are planning to rebuild their plant and extend their capacity.

=The National India Rubber Co. have hitherto sold practically their entire outfit from the home office at Bristol, but on April 1 a marked change in the selling system was inaugurated, with a view to a systematic division and distribution of the work, which, it is believed, will greatly increase their facilities and volume of business. Henceforth there will be four selling agencies: (1) The National India Rubber Co. will cover from their Bristol office the New England states, New Jersey, New York city, and Philadelphia; (2) The Iroquois Rubber Co. (Buffalo, N. Y.) will cover the greater part of New York state and Pennsylvania, and eastern Ohio; (3) the Chicago Rubber Shoe Co. will cover the western territory, and (4) the Maryland Rubber Co. (Baltimore) the south and southeast.

=It is understood that the Morgan & Wright factory is to be removed from Chicago to Detroit, the Rubber Goods Manufacturing Co., who own it, having decided to establish a plant in the latter city.

=Mr. Leon Ekert, of Ekert Brothers, Hamburg, agents of the United States Rubber Co., for Germany and other continental countries, will be on this side of the Atlantic until the middle of May, and may be addressed in care of the United States company in regard to any novelties in rubber which manufacturers may have to offer.

=The factory of the American Rubber Co., at Cambridge, Massachusetts, was closed for the annual inventory for the last three days of the week ending April 1, and work was resumed on Monday, April 3.

=Charged with hazing Charles A. Bolt, a fellow employé in the Lycoming Rubber Co., George T. Ellis, A. M. Rhoades and Roy Winner, of Williamsport, Pennsylvania, have been made joint defendants in a suit for \$10,000 damages.

#### PERSONAL MENTION.

THE governor of Connecticut, the Hon. Henry Roberts was entertained at luncheon in the new dining rooms at the office of the Hartford Rubber Works Co. on April 1, the party including several officials of the rubber company and also of the Electric Vehicle Co. and the Pope Manufacturing Co. Governor Roberts and his party were taken in automobiles to the rubber works, over which the state flag was flying, in recognition of the visit of the chief magistrate.

=Colonel Frank L. Locke, general superintendent of the Boston Rubber Shoe Co., as president of the Alumni Association of the Massachusetts Institute of Technology, is doing excellent work in throwing light upon and opposing the merger that has been suggested between the Institute and Harvard University. As an increasing number of "Tech" men are connected with the rubber trade it will interest them to know that in all probability the individuality of their excellent technical school will be preserved.

=Mr. Harry Keene, secretary of the Rubber Goods Manufacturing Co., and Mr. Leonard Richards, president of the Boston Artificial Leather Co., were among the tenants of the apartment house, No. 281 Fifth avenue, New York, which building was burned on the night of March 25. They were obliged to leave their rooms hastily, without waiting to secure any of their valuables.

=Mr. William R. Dupee, of Boston, president of the American Rubber Co., and Mrs. Hadassah Mackintire, of Watertown, Mass., were married in Grace Church, at Newton, on April 19. Colonel Samuel P. Colt was best man.

=Mr. Charles R. Flint is in St. Petersburg, mentioned in connection with several representatives of gun and armor-plate manufacturing firms seeking to do business with the Russian government.

## REVIEW OF THE CRUDE RUBBER MARKET.

THE world's visible supplies of crude rubber have been measurably increased of late, with the result that the quotations presented herewith show a decline, except as regards fine Pará, which is held at an advance over the figures printed in this department one month ago. Some of the African grades are quoted without change, while a decline appears in the case of others, as well as in coarse Pará and Peruvian (Caucho).

The arrivals at Pará during March were the largest ever recorded in a single month, the explanation of which doubtless is that rubber production in the Acre district, having been restored to normal conditions, is now expanding, and the output of that region, being so remote from the seaboard, does not reach Pará until near the end of the season.

Total receipts for the season at Pará (including Caucho) according to the best returns available on April 28 had been 29,050 tons, as compared with 27,520 tons to April 30 last year—an increase of 1530 tons. By the end of March the arrivals at Manáos had exceeded by 1502 tons the arrivals for the first nine months of the preceding crop year. The increase at Manáos had been due to larger arrivals from the Acre, from the river Madeira (evidently Bolivian rubber), and from Peru, together with an increase of 502 tons in Caucho. If the Pará receipts for May and June shall be as large as last year, the total crop will be 1500 tons in advance of the production of any former crop season.

At the Antwerp sale on April 26 only about 300 tons were offered, all of which found buyers, the average prices being higher by about 10 centimes per kilo (near 1 cent per pound) than those of the preceding monthly sale on March 29. As the quality of the lots offered was somewhat lower than that sold at the March auction, it is estimated that the actual rise by ratio of value is not far from 2 cents per pound in the New York market. It is not thought that much of the rubber sold will reach the United States.

Following is a statement of prices of Pará grades, one year ago, one month ago, and on April 30—the current date.

PARÁ.	May 1, '04.	April 1, '05.	April 30.
Islands, fine, new.....	108@109	127@128	129@130
Islands, fine, old.....	@	none here	none here
Upriver, fine, new.....	111@112	129@130	130@131
Upriver, fine, old.....	112@113	none here	none here
Islands, coarse, new.....	64@ 65	74@ 75	73@ 74
Islands, coarse, old.....	@	none here	75@ 76
Upriver, coarse, new.....	86@ 87	96@ 97	95@ 96
Upriver, coarse, old.....	@	none here	none here
Caucho (Peruvian) sheet.....	69@ 70	75@ 76	73@ 74
Caucho (Peruvian) ball.....	78@ 79	82½@ 83	81@ 82

Quotations for other grades in the New York market are generally lower:

AFRICAN.	CENTRALS.
Sierra Leone, 1st quality 100@101	Esmeralda, sausage... 85 @86
Massai, red..... 100@101	Guayaquil, strip..... 74 @75
Benguella..... 79@ 80	Nicaragua, scrap... .84 @85
Cameroon ball..... 67@ 68	Panama, slab..... 64 @65
Accra flake..... 30@ 31	Mexican, scrap..... 86 @87
Lopori ball, prime..... 106@107	Mexican, slab..... 64 @65
Lopori strip, prime..... 102@103	Mangabeira, sheet.... 50 @58
Ikelemba..... 107@108	EAST INDIAN.
Madagascar, pinky.... 85@ 86	Assam..... 96 @97
	Borneo..... 42 @43

## Late Pará cables quote:

	Per Kilo.	Per Kilo.
Islands, fine.....	5\$750	Upriver, fine..... 6\$700
Islands, coarse.....	2\$550	Upriver, coarse..... 4\$400
Exchange, 16¢.		

## Last Manáos advices:

Upriver, fine.....	6\$675	Upriver, coarse.....	3\$975
Exchange, 16¢.			

## NEW YORK RUBBER PRICES FOR MARCH (NEW RUBBER).

	1904.	1905.	1904.	1905.
Upriver, fine.....	129@1.34	1.06@1.12	90	90.93
Upriver, coarse.....	94@1.00	84@ .87	72	71.74
Islands, fine.....	1.25@1.31	1.03@1.08	86	86.90
Islands, coarse.....	75@ .80	66@ .70	55	55.55
Cametá.....	77@ .82	66@ .70	57	57.61

In regard to the financial situation, Albert B. Beers (broker in India-rubber, No. 68 William street, New York), advises us:

"There has been but little change in money market conditions during April from those prevailing in March, except that call money has ruled a little higher, but commercial paper has continued at 4 @ 5 per cent. for the best rubber names, and 5 @ 6 per cent. for the general run, with a fair demand."

## Statistics of Para Rubber (Excluding Caucho).

	NEW YORK.	Total 1905.	Total 1904.	Total 1903.
	Fine and Medium.	Coarse.		
Stocks, February 28 .. tons	132	4 =	136	115
Arrivals, March.....	2190	958 =	3148	2416
Aggregating.....	2322	962 =	3284	2531
Deliveries, March.....	2101	840 =	2941	1431
Stocks, March 31.....	221	122 =	343	246

	PARÁ.			ENGLAND.		
	1905.	1904.	1903.	1905.	1904.	1903.
Stocks, Feb. 28.... <i>tons</i>	810	435	30	305	380	1145
Arrivals, March.....	3800	3970	4030	770	875	1455
Aggregating.....	4710	4405	4060	1075	1255	2600
Deliveries, March.. ..	3881	3800	3805	800	775	1050
Stocks, March 31.....	829	605	255	275	480	1550

World's visible supply, March 31..... tons	3511	2506	4547
Pará receipts, July 1 to March 31.....	23,256	22,345	21,211
Pará receipts of Caucho, same dates.....	3704	3129	2329
Afloat from Pará to United States, March 31.....	829	392	1229
Afloat from Pará to Europe, March 31.....	1210	753	974

## London.

## EDWARD TILL &amp; Co. report stocks [April 1]:

	1905.	1904.	1903.
LONDON { Pará sorts..... tons	—	—	—
{ Borneo.....	8	4	26
{ Assam and Rangoon.....	1	6	3
{ Penang.....	133	—	—
{ Other sorts.....	181	206	188
Total.....	323	216	217
LIVERPOOL { Pará.....	278	483	1545
{ Caucho.....	174	196	294
{ Other sorts.....	460	472	466
Total, United Kingdom.....	1232	1367	2525
Total, March 1.....	1264	1136	1939

## PRICES PAID DURING MARCH.

	1905.	1904.	1903.
Pará fine, hard.. . . . 5/ 4¼@5/ 7	4/ 6 @4/ 9	3 8 @3 10 1/4	
Do soft..... 5/ 5 @5 7 1/2	4 5 @4 8	3 8 @3 10	
Negroheads, scrappy.. 4/ 0½@4/ 3	3/ 6½@3/ 9	3 0 1/2 @3 1 1/2	
Do Camera 3/ 3 @3/ 3 1/2	2 10 1/2 @2 11 1/2	2 5 1/2 @2/ 6	
Bolivian..... 5/ 5 1/2@5/ 7	4/ 6 1/2@4/ 8		
Caucho, ball..... 3/ 4 @3/ 6	3/ 3 @3/ 4 1/4	2 11 @2 11 1/2	
Do slab..... 3 1 1/4 @3 3	2 10 @2 10 1/4	2 4 @2 4 1/2	
Do tails..... 3/ 2 1/2@3/ 2 3/4	No sales	No sales	



**London.**

APRIL 1.—A dull tone has prevailed and prices of Paras are 1d. lower; little business has been done. Fine hard sold at 5s. 7½d. @ 5s. 6¾d., closing at the latter figure, and soft fine at 5s. 7d. @ 5s. 6½d. Bolivian fine nominally 5s. 7d.; Mollendo, nearest value 5s. 6d. At to-day's auction the moderate supplies met a slow demand and only a small part sold at rather lower prices.

**PLANTATION RUBBER.**

**March 31 Auction.**—Seventy-three packages offered and 27 sold. Ceylon fine pale biscuits at 6s. 6d. [= \$1.58½]; ditto rather moldy, 6s. 5s.; good scrap, 4s. 6d. @ 4s. 7d.; inferior mixed ditto 3s. 11s. @ 4s. good ball, 3s. 9d.

**April 1 Auction.**—Ninety-eight packages offered and 36 sold. Ceylon fine thin biscuits at 6s. 2d. @ 6s. 3¼d.; [= \$1.52½]; fair to good scrap at 4s. 3d. @ 4s. 10d.; inferior dirty ditto at 3s. Straits fine thin biscuits at 6s. 2d.

The *Times of Ceylon* (Colombo) contains the following special cable despatch in its issue of March 9, which was not a rubber auction day: "To-day 2000 pounds of rubber were sold at 6s. 7d. The rubber was from the following Ceylon estates: Ingoya (Ceylon Tea Plantations); Hattangalla (Neboda); Weoya and Polatagama (Yatiantota Ceylon Tea Co.); and Pallagoda (Kalutara Co., Limited)."

**Antwerp.****ANTWERP RUBBER STATISTICS FOR MARCH.**

DETAILS.	1904.	1905.	1906.	1907.	1908.
Stocks, Feb. 28, kilos	557,400	335,000	475,538	984,820	781,100
Arrivals, March....	334,000	751,077	428,455	258,131	570,052
Congo sorts....	266,097	1,114	4,414	235,518	525,771
Other sorts....		1,114	2,000	22,613	41,281
Aggregating....	891,400	1,086,167	903,993	1,242,951	1,351,152
Sales, March.....	507,455	385,432	632,109	401,273	507,318
Stocks, March 31.	323,945	700,735	271,884	841,678	843,834
Arrivals since Jan. 1	1,281,027	1,637,802	1,146,128	1,501,489	1,573,310
Congo sorts....	1,002,124	1,112,000	1,108,127	1,436,687	1,411,213
Other sorts....	278,903	314,996	177,131	64,802	162,100
Sales since Jan. 1..	1,498,443	1,547,967	1,532,349	1,074,520	1,343,515

**RUBBER ARRIVALS AT ANTWERP.****APRIL 4.—By the *Anversville*, from the Congo:**

Bunge & Co.... (Société Générale Africaine) kilos	90,000
Do.....	18,400
Do..... (Sultanats du Haut Obangi)	25,200
Do..... (Société "La Kotto")	2,200
L. & W. Van de Velde .. (Cie. du Kasai)	68,200
Comptoir des Produits Coloniaux ("N'Goko" Sangha)	3,000
Société Coloniale Anversoise (Cie. du Kouango Français)	10,000

**PARA RUBBER VIA EUROPE.**

	POUNDS
MAR 27.—By the <i>Eden</i> —Liverpool:	
General Rubber Co. (Fine).....	11,500
Wallace & Gough (Cane).....	5,000
MAR 27.—By the <i>Prinzess</i> —Hamburg:	
Poel & Arnold (Cane).....	1,000

**MAR 30.—By the *Borne*—Liverpool:**

A. T. Morse & Co. (Fine).....	11,500
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**MAR 31.—By the *Tutor*—Liverpool:**

New York Commercial Co. (Fine)...	45,000
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**MAR 31.—By the *Grat*—Hamburg:**

Poel & Arnold (Fine).....	15,700
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**APR 1.—By the *Campa*—Liverpool:**

New York Commercial Co. (Fine).....	45,000
General Rubber Co. (Fine).....	17,000

**APR 10.—By the *Menzobares*—Ciudad Bolívar:**

Thebaud Brothers (Fine).....	2,500
Thebaud Brothers (Coarse).....	3,000

**APR 10.—By the *Coronia*—Liverpool:**

General Rubber Co. (Fine).....	11,000
New York Commercial Co. (Coarse).....	6,000

**Rubber Scrap Prices.**

NEW YORK quotations—prices paid by consumers for carload lots, in cents per pound—show no change since the last report:

Old Rubber Boots and Shoes—Domestic.....	5¼ @ 5½
Do..... Foreign.....	5½ @ 5¾
Pneumatic Bicycle Tires.....	4¼ @ 4½
Solid Rubber Wagon and Carriage Tires.....	6
White Trimmed Rubber.....	8½ @ 8¾
Heavy Black Rubber.....	4
Air Brake Hose.....	1½ @ 2½
Fire and Large Hose.....	2 @ 2¼
Green Hose.....	1 @ 1½
Latexing.....	14 @ 1

Do..... (Belge du Haut Congo)	1,000
Do..... (Cie. de Lomami)	20,000
M. S. Cols..... (Société l'Ikelemba)	1,000
Charles Dethier..... (Société La M'Poko)	8,000
Cie. Commerciale des Colonies..... (La Haut Sangha)	8,600
Do.....	2,000
G. & C. Krelinger..... (La Lobay)	6,000
Comptoir Commercial Congolais.....	9,700 273,300

**Liverpool.****WILLIAM WRIGHT & Co. report [April 1]:**

**Fine Para.**—During the early part of the month there was a strong demand at advancing prices and a new record was created, 5s. 9d. [=about \$1.40] being paid for hard cure Fine; since then, under the influence of heavy receipts and a pause in the demand, prices have reacted and the market closes quiet at 5s. 5¼d. for Upriver. Whether this month's receipts are at the expense of next remains to be seen; if they are we shall certainly see a further advance. For forward delivery there has been a good demand, principally for Upriver fine at current rates, closing values for Upriver up to May-June 5s. 6d.

**IMPORTS FROM PARA AT NEW YORK.**

[The Figures Indicate Weights in Pounds.]

**April 4.—By the steamer *Dunstan*, from Manáos and Pará:**

IMPORTERS.	Fine.	Medium.	Coarse.	Caucho.	Total.
A. T. Morse & Co.....	244,500	42,400	102,000	100,000=	488,900
Poel & Arnold.....	224,100	111,100	101,300	50,900=	487,400
New York Commercial Co.....	220,200	51,000	70,800	84,900=	426,900
General Rubber Co.....	209,700	40,500	84,200	20,600=	355,000
Neale & Co.....	124,300	21,000	19,200	600=	165,100
Edmund Reeks & Co.....	.....	.....	38,000	.....=	38,000
Laurence Johnson & Co.....	6,300	2,100	6,300	.....=	14,700
Lionel Hagenars & Co.....	4,800	.....	8,700	.....=	13,500

Total..... 1,033,900 268,100 430,500 257,000= 1,989,500

**April 14.—By the steamer *Maranhense* from Manáos and Pará:**

New York Commercial Co.....	200,700	50,200	63,300	21,500=	335,700
Poel & Arnold.....	66,600	19,500	59,700	35,400=	181,200
General Rubber Co.....	73,600	16,600	19,500	52,500=	162,200
A. T. Morse & Co.....	10,700	2,500	47,000	2,300=	62,500
Edmund Reeks & Co.....	13,800	.....	7,900	.....=	21,700
Hagemeyer & Brunn.....	1,300	.....	14,700	.....=	16,000
Herbst Brothers.....	1,600	.....	900	.....=	2,500

Total..... 368,300 88,800 213,000 111,700= 781,800

**April 24.—By the steamer *Camelense*, from Manáos and Pará:**

A. T. Morse & Co.....	141,200	20,700	58,800	77,900=	298,600
Poel & Arnold.....	28,600	6,000	39,700	102,500=	176,800
New York Commercial Co.....	63,500	29,100	48,700	1,500=	142,800
General Rubber Co.....	30,800	6,600	14,200	46,400=	98,000
Neale & Co.....	32,600	6,200	34,300	.....=	73,100
Edmund Reeks & Co.....	6,300	.....	5,000	.....=	11,300
Lionel Hagenars & Co.....	5,200	.....	2,800	.....=	8,000

Total..... 308,200 68,600 203,500 228,300= 808,600

[Note.—The steamer *Horatio*, from Pará, is due at New York, May 5, with 165 tons Rubber.]

**RUBBER MILL MACHINERY FOR SALE.**

One Harris Corliss Engine, 750 h. p.; Knowles Pump and Condenser, practically new; Pump and Condenser, never used at all; one Fishkill Corliss Engine, 500 h. p., used 14 months; one Wright Corliss Engine, 350 h. p.; ten rubber Calenders, of different sizes; sixty grinders; twelve crackers; three Seeley Cutting Presses; two Clark Tubing Machines one for insulating; one Hydraulic Press, five opening, 9 inch ram; Rubber Horse Shoe moulds; one Wizzer or Washer; two Devulcanizers 6 ft. X 25 ft., one 5 ft. X 20 ft., one 3½ ft. X 25 ft., all complete with tracks, carriages, etc.; a large lot of rubber mill Shafting; also a lot of Shafting, Hangers, Pulleys, and a lot of miscellaneous Rubber Mill Machinery. All of this stock is in the best of condition. Some of it has not been used at all and the rest practically as good as new. Will accept any reasonable price. Please come to see me as I want to unload all stock that I have on hand. PHILIP MCGRORY, Trenton, New Jersey.

APR. 17.—By the *Maracas*—Ciudad Bolívar:

Thebaud Brothers (Fine)	5,000
Thebaud Brothers (Coarse)	5,000

APR. 22.—By the *Baltic*—Liverpool:

A. T. Morse & Co. Fine	10,000
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## OTHER ARRIVALS IN NEW YORK

## CENTRALS.

POUNDS.

MAR. 25.—By the *Monterey*—Mexico:

Harburger & Stack	2,500
H. Marquardt & Co.	1,000
Fred. Probst & Co.	1,000
E. Steiger & Co.	700
L. N. Chemedin & Co.	800

MAR. 25.—By the *George*—Liverpool:

J. H. Rosbach & Bros	9,400
Hirsch & Kaiser	2,500

MAR. 25.—By the *Baltic*—Liverpool:

Poel & Arnold	17,000
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MAR. 27.—By the *Matanzas*—Mexico:

George A. Alden & Co.	30,000
H. Marquardt & Co.	1,500

MAR. 28.—By the *Sibiria*—Colombia:

G. Amsinck & Co.	2,500
Roldan & Van Sickle	1,000
J. H. Recknagel & Son	80
American Trading Co.	500

MAR. 29.—By *El Dorado*—New Orleans:

A. T. Morse & Co.	5,000
Manhattan Rubber Mfg. Co.	3,000

MAR. 29.—By the *Advance*—Colon:

G. Amsinck & Co.	5,800
Hirzel, Feltman & Co.	4,800
Lawrence Johnson & Co.	3,000
Gabriel Perigault	3,400
J. A. Medina & Co.	3,000
Dumarest Bros. & Co.	1,700
Roldan & Van Sickle	1,500
De Sol's Lobo & Co.	1,600
Charles E. Griffin	1,300
Eggers & Heinlein	1,000
Landman & Kemp	800
A. M. Capen's Sons	900

MAR. 30.—By the *Proteus*—New Orleans:

A. T. Morse & Co.	2,500
Eggers & Heinlein	1,500

MAR. 31.—By the *Teutonic*—Liverpool:

Wallace L. Gough	16,000
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MAR. 31.—By the *Graf Waldersee*—Hamburg:

Poel & Arnold	7,500
Thomsen & Co.	3,000

APR. 1.—By the *Esperanza*—Mexico:

American Trading Co.	2,500
Strube & Ulze	2,500
H. Marquardt & Co.	1,000
Graham, Hinkley & Co.	1,000
Harburger & Stack	700
E. Steiger & Co.	500
Isaac Kubic & Co.	500

APR. 3.—By the *Mesaba*—London:

Poel & Arnold	11,000
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APR. 3.—By the *Altai*—Colombia, etc.:

G. Amsinck & Co.	7,500
A. F. Hanneburg	5,000
A. D. Straus & Co.	2,200
A. A. Lehman & Co.	1,000
Isaac Brandon & Bros.	800
Graham, Hinkley & Co.	600

APR. 4.—By the *Chalmette*—New Orleans:

A. T. Morse & Co.	7,000
A. N. Rotholz	5,500

APR. 4.—By the *Bluecher*—Hamburg:

George A. Alden & Co.	4,500
Rubber Trading Co.	3,300

APR. 5.—By the *Canning*—Bahia:

A. D. Hitch & Co.	11,000
J. H. Rosbach & Bros	3,500
Hirsch & Kaiser	2,500

APR. 6.—By the *Financ*—Colon:

G. Amsinck & Co.	5,600
Hirzel, Feltman & Co.	5,000
E. B. Strout	4,700
Gabriel Perigault	3,200
Piza, Nephews & Co.	3,000
Isaac Brandon & Bros	1,700
A. Rosenthal's Sons	2,800
Silva, Bussenius & Co.	1,500

APR. 8.—By the *Vigilant*—Hamburg:

George A. Alden & Co.	17,500
H. Marquardt & Co.	2,500

## CENTRALS—Continued.

E. Steiger & Co.	1,000
Harburger & Stack	1,000

APR. 11.—By the *Monte*—New Orleans:

A. T. Morse & Co.	6,500
Manhattan Rubber Mfg. Co.	6,000

APR. 13.—By the *Gracia*—Honduras:

Halse & Nexin	2,000
Rosing Brothers & Co.	2,000

APR. 12.—By the *Seguranca*—Colon:

G. Amsinck & Co.	9,100
J. A. Medina & Co.	7,500
Gabriel Perigault	7,100
Roldan & Van Sickle	4,500
Dumarest Bros. & Co.	3,500
Hirzel, Feltman & Co.	3,500
E. B. Strout	1,700
Lawrence Johnson & Co.	1,500
A. Rosenthal's Sons	1,500
Landman & Kemp	1,200
A. M. Capen Sons	1,000
Meyer Hecht	900

APR. 12.—By the *Sarnia*—Colombia:

Banco de Exportasos	3,500
Roldan & Van Sickle	2,000
Pedro A. Lopez	1,000
A. A. Lido & Co.	1,000
A. Held	800
Isaac Brandon & Bros	800

APR. 13.—By the *Titan*—Bahia:

Hirsch & Kaiser	10,000
J. H. Rosbach & Bros	8,000
A. D. Hitch & Co.	4,500

APR. 15.—By the *City of Washington*—Colon:

G. Amsinck & Co.	8,600
Hirzel, Feltman & Co.	5,400
Eggers & Heinlein	800

APR. 15.—By the *Havana*—Mexico:

E. Steiger & Co.	4,000
Harburger & Stack	3,000
Strube & Ulze	1,000
N. H. Hinkley & Co.	1,000
L. N. Chemedin & Co.	800
American Trading Co.	700
H. Marquardt & Co.	500

APR. 17.—By the *St. Louis*—London:

A. T. Morse & Co.	4,500
George A. Alden & Co.	1,500

APR. 17.—By *El Dorado*—New Orleans:

A. T. Morse & Co.	6,000
A. N. Rotholz	2,000
Andreas & Co.	1,000

APR. 18.—By the *Byron*—Bahia:

Hirsch & Kaiser	20,000
J. H. Rosbach & Bros	10,000
A. D. Hitch & Co.	4,000

APR. 20.—By the *Allianza*—Colon:

G. Amsinck & Co.	7,000
J. A. Medina & Co.	3,600
Isaac Brandon & Bros	3,700
Gabriel Perigault	2,600
Smithers, Nordenholt & Co.	2,700
W. Loiza & Co.	2,000
Piza, Nephews & Co.	1,000
Kunhardt & Co.	1,300
Jimenez & Escobar	700
Krederick Probst & Co.	500

APR. 20.—By the *Proteus*—New Orleans:

A. T. Morse & Co.	3,500
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APR. 22.—By the *Matanzas*—Mexico:

George A. Alden & Co.	30,000
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## AFRICANS.

POUNDS.

MAR. 25.—By the *George*—Liverpool:

A. T. Morse & Co.	37,000
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MAR. 25.—By the *Baltic*—Liverpool:

George A. Alden & Co.	41,000
Poel & Arnold	37,000
A. T. Morse & Co.	6,000
A. W. Bruhn	4,500
Wallace L. Gough	2,000

MAR. 27.—By the *Etruria*—Liverpool:

General Rubber Co.	33,000
George A. Alden & Co.	25,000

MAR. 27.—By the *Proteus*—Hamburg:

A. T. Morse & Co.	22,000
George A. Alden & Co.	17,000
Poel & Arnold	4,500
Rubber Trading Co.	8,000

MAR. 28.—By the *Kroonland*—Antwerp:

George A. Alden & Co.	23,000
Poel & Arnold	23,000

## AFRICANS—Continued.

APR. 1.—By the <i>Rotterdam</i> —Rotterdam:	
Whitely & Smillie	15,000

MAR. 30.—By the *Bonic*—Liverpool:

A. T. Morse & Co.	30,000
George A. Alden & Co.	6,000
Rubber Trading Co.	5,000
Poel & Arnold	12,000
Wallace L. Gough	11,500

MAR. 31.—By the *Teutonic*—Liverpool:

Poel & Arnold	45,000
A. T. Morse & Co.	27,000
Wallace L. Gough	21,000
Henry A. Gould & Co.	2,000

MAR. 31.—By the *Graf Waldersee*—Hamburg:

Poel & Arnold	50,000
A. T. Morse & Co.	30,000
Robinson & Tallman	11,000
Rubber Trading Co.	8,500
George A. Alden & Co.	5,000

APR. 1.—By the *Campania*—Liverpool:

George A. Alden & Co.	15,000
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APR. 1.—By the *La Lorraine*—Havre:

General Rubber Co.	22,000
A. T. Morse & Co.	5,000

APR. 3.—By the *Celtic*—Liverpool:

A. T. Morse & Co.	33,000
George A. Alden & Co.	22,000
Poel & Arnold	11,000
Rubber Trading Co.	5,000

APR. 4.—By the *Rotterdam*—Rotterdam:

Poel & Arnold	11,000
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APR. 4.—By the *Bluecher*—Hamburg:

A. T. Morse & Co.	53,000
Joseph Cantor	7,000
George A. Alden & Co.	4,500

APR. 5.—By the *Kurfurst*—Bremen:

General Rubber Co.	69,000
Poel & Arnold	11,000

APR. 6.—By the *Oceanic*—Liverpool:

A. T. Morse & Co.	65,000
Poel & Arnold	15,000

APR. 10.—By the *Caronia*—Liverpool:

George A. Alden & Co.	75,000
A. T. Morse & Co.	15,000

APR. 10.—By *La Torrance*—Havre:

General Rubber Co.	34,000
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APR. 10.—By the *Minneapolis*—London:

George A. Alden & Co.	33,000
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APR. 11.—By the *Finland*—Antwerp:

Robinson & Tallman	45,000
Poel & Arnold	5,000
Joseph Cantor	9,000
For Yokohama	4,500

APR. 13.—By the *Maestec*—Liverpool:

Poel & Arnold	89,000
A. T. Morse & Co.	5,000

APR. 13.—By the *Rhein*—Bremen:

General Rubber Co.	67,000
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APR. 14.—By the *Allemania*—Hamburg:

A. T. Morse & Co.	56,000
Poel & Arnold	11,000
George A. Alden & Co.	11,000

APR. 15.—By the *Vienoa*—Lisbon:

George A. Alden & Co.	55,000
Poel & Arnold	45,000

APR. 15.—By the *La Sague*—Havre:

A. T. Morse & Co.	45,000
George A. Alden & Co.	15,000

APR. 17.—By the *St. Louis*—London:

Poel & Arnold	11,000
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APR. 17.—By the *Cedric*—Liverpool:

George A. Alden & Co.	80,000
A. T. Morse & Co.	45,000
Poel & Arnold	55,000
Wallace L. Gough	8,000

APR. 18.—By the *Vaderland*—Antwerp:

Winter & Smillie	60,000
A. T. Morse & Co.	22,500
Rubber Trading Co.	25,000
Poel & Arnold	27,000

APR. 18.—By the *Noordam*—Rotterdam:

Poel & Arnold	35,000
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APR. 21.—By the *Pennsylvania*—Hamburg:

George A. Alden & Co.	6,000
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AMERICAN.	
A. T. Morse & Co. ....	44,000
Rubber Brothers .....	1,000
Rubber Trading Co. ....	5,500 111,000
APR. 17.—By the <i>Reliance</i> =Liverpool:	
A. T. Morse & Co. ....	2,000

## EAST INDIAN.

MAR. 31.—By the <i>Portland</i> =Hamburg:	
A. T. Morse & Co. ....	2,500
MAR. 31.—By the <i>Croydon</i> =Singapore:	
Poel & Arnold .....	47,000
Winter & Smillie .....	45,000
George A. Alden & Co. ....	2,000
Rubber Trading Co. ....	1,000
Wallace L. Gough .....	1,000 137,000

APR. 7.—By the <i>Cherise</i> =Singapore:	
Robinson & Tallman .....	11,500
Pierre T. Betts .....	17,500 29,000

APR. 10.—By the <i>Amoy</i> =Calcutta:	
George A. Alden & Co. ....	10,000

APR. 17.—By the <i>St. Louis</i> =London:	
Poel & Arnold .....	1,500
Wallace L. Gough .....	5,000 7,500

APR. 17.—By the <i>Succa</i> =Singapore:	
Winter & Smillie .....	35,000
George A. Alden & Co. ....	11,500
Robert Brann & Co. ....	17,500
D. A. Shaw & Co. ....	11,500
Pierre T. Betts .....	5,000 80,500

APR. 21.—By the <i>Armenian</i> =Liverpool:	
Poel & Arnold .....	1,500

## GUTTA-JELUTONG.

MAR. 31.—By the <i>Croydon</i> =Singapore:	
Poel & Arnold .....	165,000
Robert Brann & Co. ....	100,000
Pierre T. Betts .....	110,000
Heabler & Co. ....	100,000
J. W. Phyle & Co. ....	70,000 545,000

APR. 7.—By the <i>Cherise</i> =Singapore:	
Heabler & Co. ....	80,000

EAST INDIAN.	
Pierre T. Betts .....	350,000
Poel & Arnold .....	1,000
George A. Alden & Co. ....	200,000 1,080,000
APR. 17.—By the <i>Succa</i> =Singapore:	
Robert Brann & Co. ....	115,000
Wallace L. Gough .....	150,000
Heabler & Co. ....	50,000
Pierre T. Betts .....	65,000 420,000

## GUTTA-PERCHA AND BALATA.

MAR. 31.—By the <i>Croydon</i> =Singapore:	
Poel & Arnold .....	10,000

MAR. 31.—By the <i>Croydon</i> =Hamburg:	
Amernan & Patterson .....	13,500

APR. 7.—By the <i>Cherise</i> =Singapore:	
Amernan & Patterson .....	6,500

## BALATA.

MAR. 30.—By the <i>Catalina</i> =B. Thadoes:	
Middleton & Co. ....	5,000

APR. 10.—By the <i>Menzanares</i> =Ciudad Bolivar:	
Theband Brothers .....	158,000
Frame & Co. ....	2,000
Frederick Grant .....	2,000 162,000

APR. 17.—By the <i>St. Louis</i> =London:	
Wallace L. Gough .....	7,500
Earle Brothers .....	5,000 12,500

## CUSTOM HOUSE STATISTICS.

## PORT OF NEW YORK—MARCH.

Imports:	POUNDS.	VALUE
India-rubber .....	8,715,117	\$6,941,169
Gutta-percha .....	20,164	10,539
Gutta-jelutong (Pontianak) .....	1,000,204	45,082
Total .....	10,045,615	\$6,996,900
Exports:		
India-rubber .....	31,002	\$ 17,694
Reclaimed rubber .....	190,263	21,545
Rubber Scrap Imported .....	1,277,787	\$83,551

## BOSTON ARRIVALS.

	POUNDS.
MAR. 1.—By the <i>Sichom</i> =Liverpool:	
George A. Alden & Co.—African .....	15,424
MAR. 4.—By the <i>Sylvania</i> =Liverpool:	
George A. Alden & Co.—African .....	44,829
MAR. 4.—By the <i>Sagamore</i> =Liverpool:	
Poel & Arnold—Pará Coarse .....	10,691
MAR. 8.—By the <i>Sagamore</i> =Liverpool:	
George A. Alden & Co.—Fine Pará .....	10,698
George A. Alden & Co.—African .....	34,05 14,003
MAR. 9.—By the <i>Winifred</i> =Liverpool:	
George A. Alden & Co.—African .....	15,262
MAR. 13.—By the <i>Columbian</i> =London:	
George A. Alden & Co.—East Indian .....	11,759
MAR. 16.—By the <i>Etouan</i> =Antwerp:	
Winter & Smillie .....	3,891
MAR. 20.—By the <i>Bohemian</i> =Liverpool:	
Poel & Arnold—African .....	882
MAR. 20.—By the <i>Bohemian</i> =Liverpool:	
George A. Alden & Co.—African .....	44,725
MAR. 20.—By the <i>Bohemian</i> =Liverpool:	
George A. Alden & Co.—Fine Pará .....	11,101
MAR. 24.—By the <i>Canadian</i> =Liverpool:	
George A. Alden & Co.—African .....	9,498
MAR. 25.—By the <i>Michigan</i> =Liverpool:	
George A. Alden & Co.—African .....	5,861
MAR. 28.—By the <i>Cymric</i> =Liverpool:	
Poel & Arnold—African .....	18,820
MAR. 27.—By the <i>Manchester City</i> =Hamburg:	
George A. Alden & Co.—African .....	51,460
MAR. 28.—By the <i>Lancastrian</i> =London:	
George A. Alden & Co.—African .....	7,000
George A. Alden & Co.—East Indian .....	7,100 14,100
Total .....	271,816
[Value, \$198,955.]	

## OFFICIAL STATISTICS OF CRUDE INDIA-RUBBER (IN POUNDS).

## UNITED STATES.

MONTHS.	IMPORTS.	EXPORTS.	NET IMPORTS.
February, 1905 .....	9,940,958	136,562	9,804,396
January .....	7,418,006	214,264	7,203,742
Two months, 1905 .....	17,358,964	350,856	17,008,108
Two months, 1904 .....	14,141,837	473,346	13,668,541
Two months, 1903 .....	10,727,780	511,398	10,216,385

## GERMANY.

MONTHS.	IMPORTS.	EXPORTS.	NET IMPORTS.
February, 1905 .....	3,803,360	1,355,860	2,447,500
January .....	3,427,820	1,242,120	2,185,700
Two months, 1905 .....	7,231,180	2,597,980	4,633,200
Two months, 1904 .....	6,144,820	2,033,680	4,111,140
Two months, 1903 .....	5,577,220	2,151,820	3,425,400

## FRANCE.

MONTHS.	IMPORTS.	EXPORTS.	NET IMPORTS.
February, 1905 .....	2,332,440	1,415,480	916,960
January .....	2,220,020	531,360	1,688,720
Two months, 1905 .....	4,552,460	1,946,780	2,605,680
Two months, 1904 .....	3,561,800	2,288,220	1,273,580
Two months, 1903 .....	2,399,540	1,567,280	832,260

## BELGIUM.

MONTHS.	IMPORTS.	EXPORTS.	NET IMPORTS.
February, 1905 .....	1,764,230	1,335,370	428,860
January .....	1,346,376	560,859	785,517
Two months, 1905 .....	3,110,606	1,896,240	1,214,366
Two months, 1904 .....	2,626,228	2,200,772	425,456
Two months, 1903 .....	2,137,722	1,290,544	847,178

## GREAT BRITAIN.

MONTHS.	IMPORTS.	EXPORTS.	NET IMPORTS.
February, 1905 .....	4,926,320	3,496,424	1,429,896
January .....	5,160,176	3,107,552	2,052,624
Two months, 1905 .....	10,086,496	6,603,976	3,482,520
Two months, 1904 .....	10,066,112	6,837,494	3,228,618
Two months, 1903 .....	9,644,096	6,760,544	2,883,552

## ITALY.

MONTHS.	IMPORTS.	EXPORTS.	NET IMPORTS.
February, 1905 .....	141,720	34,760	106,960
January .....	158,860	27,060	131,740
Two months, 1905 .....	300,520	61,820	238,700
Two months, 1904 .....	218,020	3,960	214,060
Two months, 1903 .....			

## AUSTRIA-HUNGARY.

MONTHS.	IMPORTS.	EXPORTS.	NET IMPORTS.
February, 1905 .....	301,620	...	301,620
January .....	231,660	660	231,000
Two months, 1905 .....	533,280	666	532,620
Two months, 1904 .....	535,480	3,680	531,800
Two months, 1903 .....	477,180	440	476,740

NOTE.—German statistics include Gutta-percha, Balata, old rubber, and substitutes. French, Austrian, and Italian figures include Gutta-percha. The exports from the United States embrace the supplies for Canadian consumption.

\* General Commerce.

† Special Commerce.

WILLIAM T. BAIRD, PRESIDENT

ROBERT B. BAIRD, VICE PRESIDENT

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CLOTHS FOR MACKINTOSHES.

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FOR THE RUBBER TRADE.

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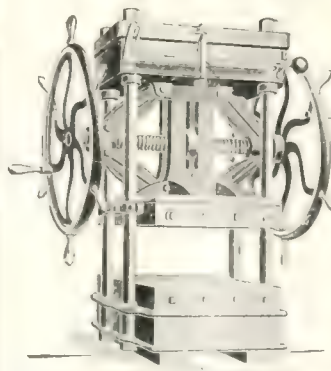
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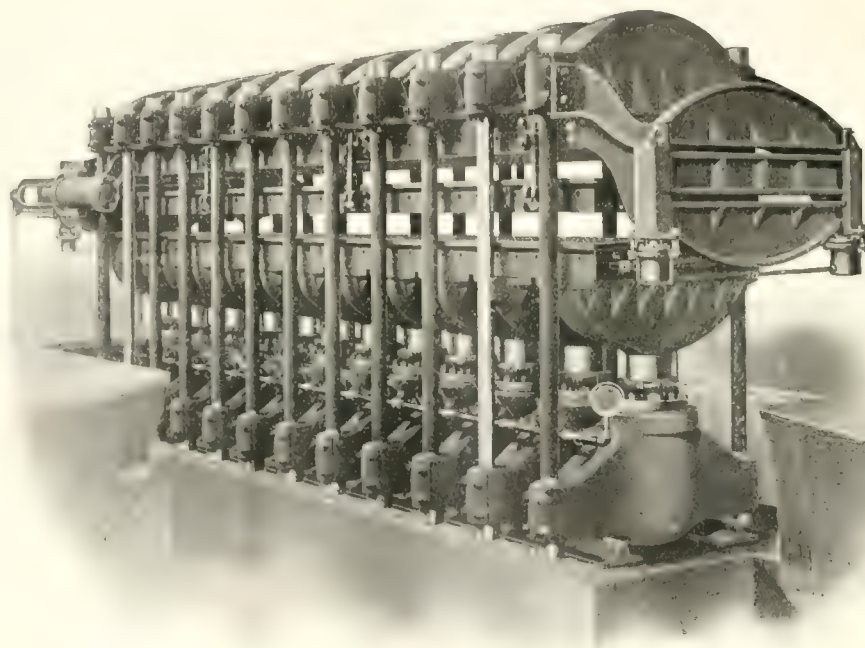
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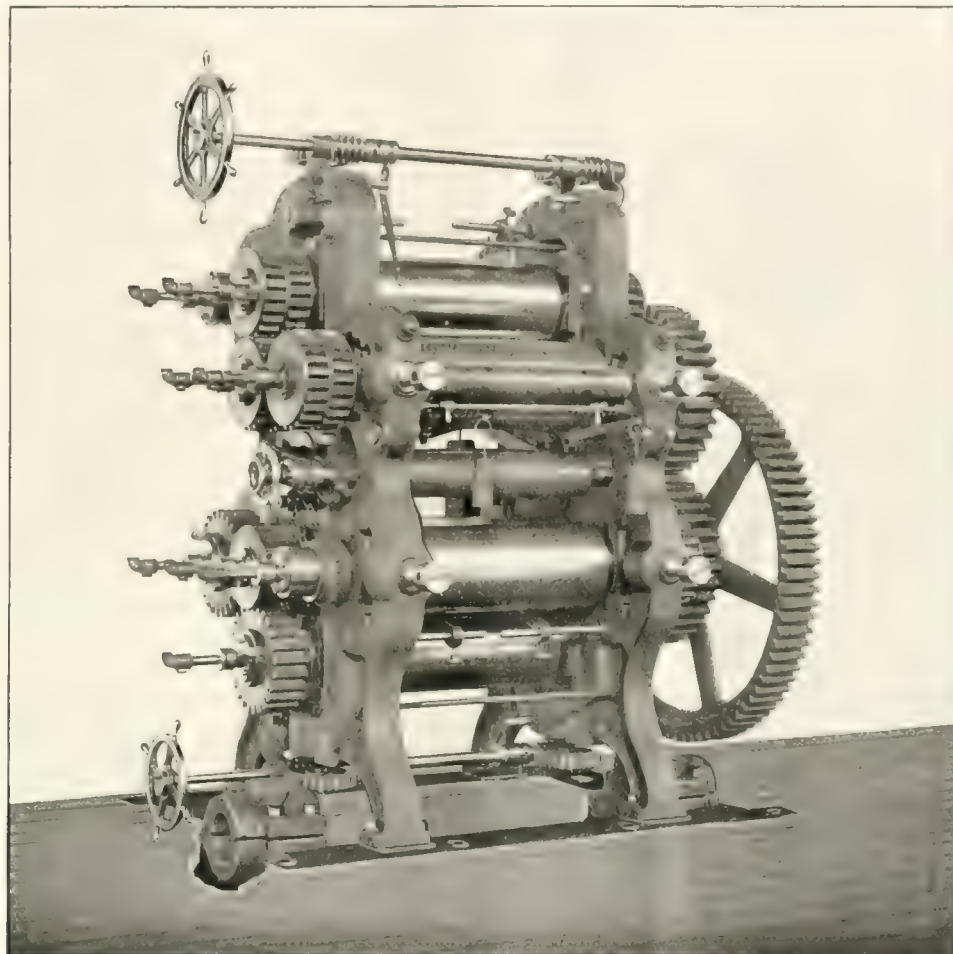
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This Composite is a Hydro Carbon  
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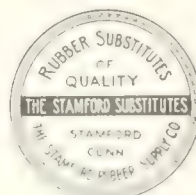
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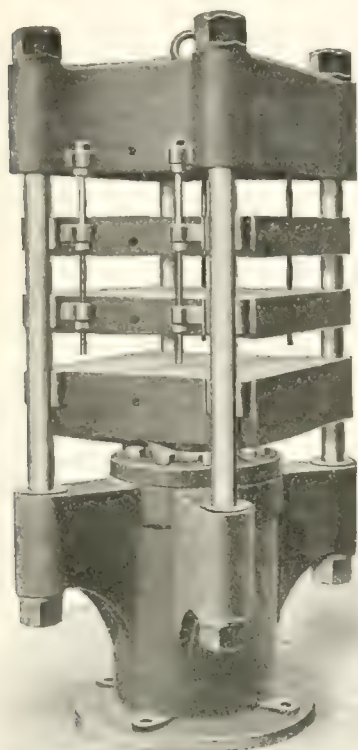
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**7,000 MILES**

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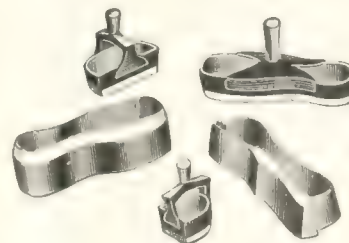
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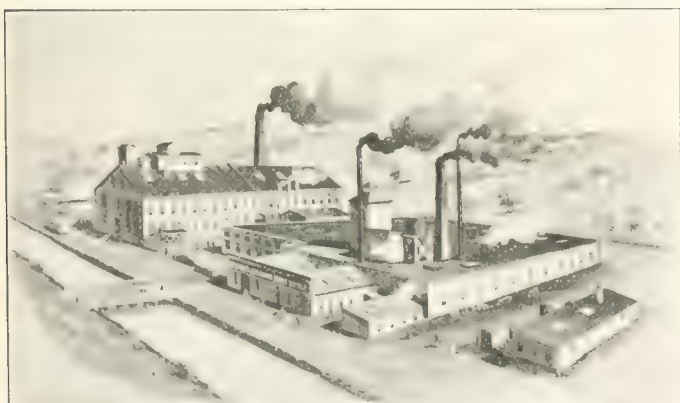
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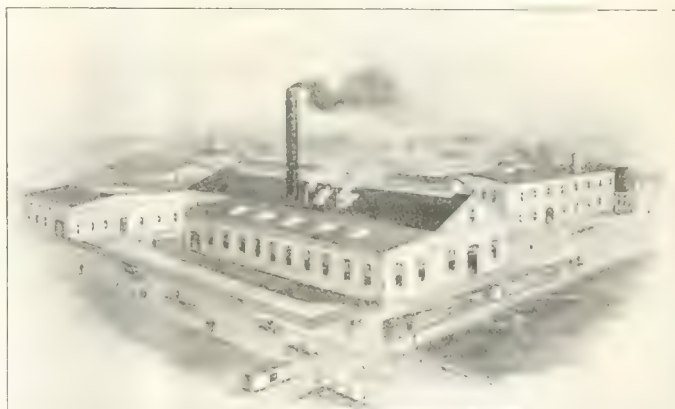
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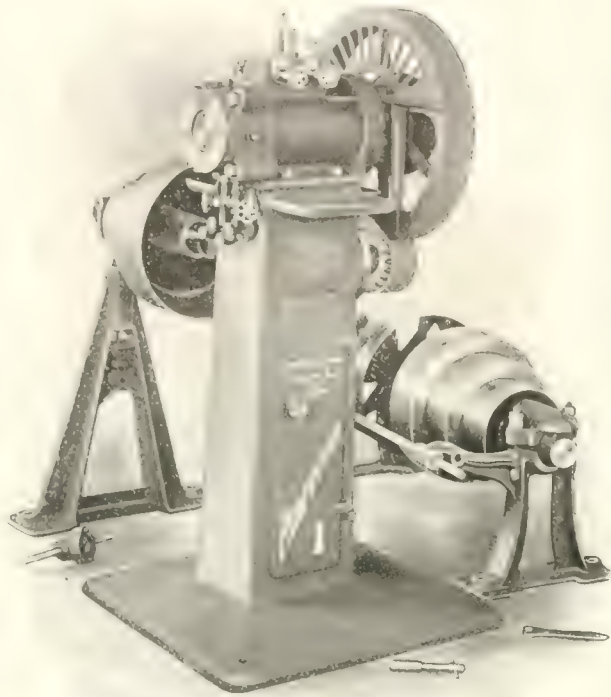
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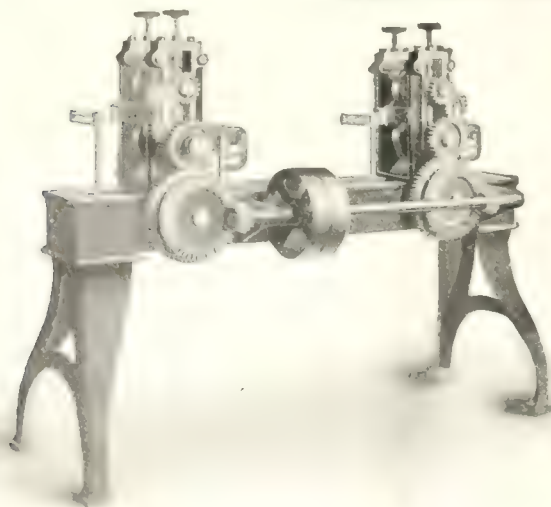
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**Rubber Strip Covering Machines**  
For Covering Electrical Wires.

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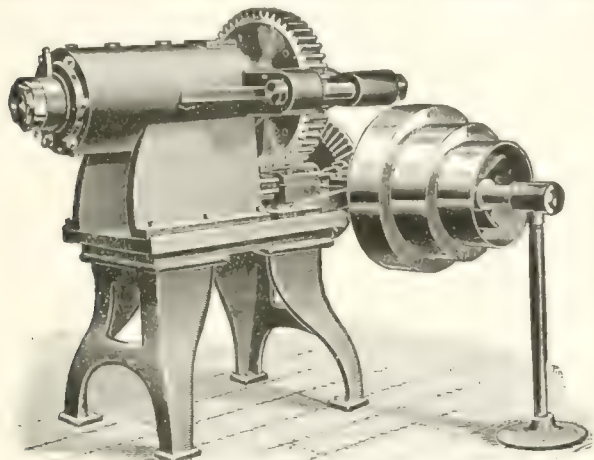
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## CLARK'S Reliable Tubing Machine

FOR THE MANUFACTURE OF RUBBER TUBING AND CORD,  
And also the Covering of Electrical and Telephone Cables.



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Manufacturer of

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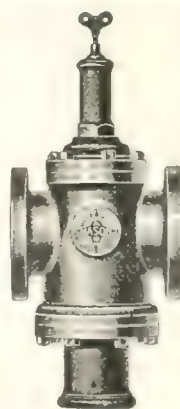
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1 year - - - - -	851.58	Contracted, 1905,	142.		126.79
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Contracted, 1905,	741.	Approximately 450,000 trees.			226.79
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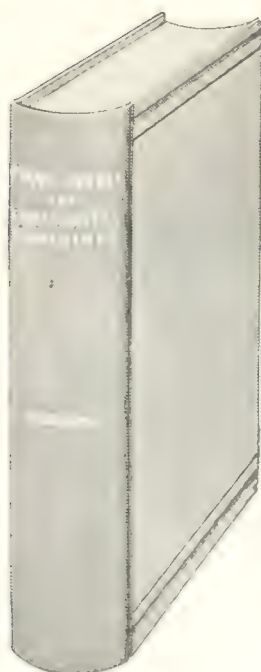
We have not paid dividends—the trees must grow first.

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**DIVIDENDS WILL BE PAID ONLY WHEN EARNED.**

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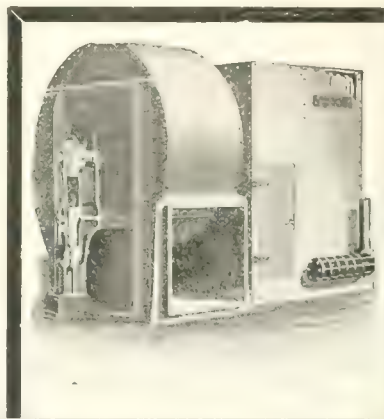
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# Publishers' Page

**What a Rubber Planter Read With Interest.**

TO THE INDIA RUBBER WORLD—*Gentlemen*: First permit me to say that I am a regular subscriber to THE INDIA RUBBER WORLD, and believe it to be generally as well edited a trade journal as I have ever seen. I have been so well pleased, however, with several things in your January number that I cannot refrain from writing you in regard to the same. The editorial covering "The Natural Supply of Rubber" is certainly plain enough, so that no one will question your assertions along that line any further, and your article entitled "Small Beginnings of a Coming (?) Great Industry" is certainly sufficient proof that you are working for the general good of the rubber business, while the article in reference to Mr. Edward V. Carey, giving his experiences, etc., is of special interest to one engaged in the cultivation of rubber.

Yours very truly, M. B. JOHNSON.

Manager The Playa Vicente Rubber Plantation and Development Co.  
San Francisco, California, January 1, 1905.

**We Do Try to Keep Informed.**

THE *Pacific Commercial Advertiser*, published at Honolulu, Hawaii territory, of January 26, said:

THE INDIA RUBBER WORLD, a publication devoted to rubber interests, has written Mr. Hall asking for samples of the Nahiku rubber, and also for an article on rubber tree growth in Hawaii and adaptability of the islands for rubber development.

And this is a translation from the *Pará* journal, *Folha do Norte*, of January 17:

THE INDIA RUBBER WORLD, a standard organ, published in the interest of the import and export trade of crude and manufactured rubber throughout the world, has, in view of the flattering reports which it has received respecting the excellent quality of crude rubber manufactured by use of "Poselina," requested the distinguished manufacturer, Mr. A. J. A. deMagalhães, to send samples of this chemical preparation and of the crude rubber manufactured by its aid. The letter referred to may be read by all persons desiring to see it, at the "Nazareth" pharmacy.

**Compliment from a St. Louis Editor.**

"I WISH to say that THE INDIA RUBBER WORLD is the only purely trade paper reaching us that I read through, as a matter of interest apart from business considerations. Rubber means nothing more to me than any other material used in manufactures, but travel and exploration were always my fads, and your magazine 'puts me next' to present day conditions in many faraway lands."

"Tres Estimable Journal."

M. le Directeur de THE INDIA RUBBER WORLD, New York: Nous voir envoys, ci-joint, un mandat-poste international pour notre abon-

## Dixon's Graphite Gear Grease

SAVES NOISE  
SAVES WEAR  
SAVES MONEY  
SAMPLES  
FREE

Joseph Dixon Crucible Co., Jersey City, N. J.

OFFICES:

No. 150 NASSAU ST., NEW YORK

nement à votre tres estimable Journal, allant d' Octobre, 1904. á Septembre, 1905. --- Veuillez aigréer, Monsieur, nos bien empressées salutations.

Ham (Somme), France, December 1, 1904.

**Articles on Tropical Planting Appreciated.**

TO THE INDIA RUBBER PUBLISHING CO —*Dear Sirs*: In renewing my subscription to THE INDIA RUBBER WORLD, I wish to express my appreciation of the articles on tropical planting that have appeared in THE WORLD during the past two years, and hope we may receive more of them. Very truly yours,

GEORGE WOOLSEY.

Fonda, New York, December 1, 1904.

**A Book that is Easy to Use.**

WE have a letter in regard to Mr. Pearson's book, "Crude Rubber and Compounding Ingredients," commending it for reasons given below:

"It is a perfect encyclopedia. I wish specially to compliment you on the excellent arrangement of the matter. The comprehensive index at the back and the alphabetical subdivision of many of the chapters make it exceptionally convenient as a work of reference. To anyone who is interested, even to a slight degree, in rubber manufacture, your book is invaluable. I want to add that, while doubtless intended chiefly for a book of reference, you have succeeded in making it exceedingly readable."

**BUSINESS OPPORTUNITY.**

WANTED.—To correspond with some one having a few thousand dollars to invest in a factory manufacturing Druggists' Sundries. Must be a man who can fill an office position and has some knowledge of sales management. The business is well established and profitable. Address C. E. M., care of THE INDIA RUBBER WORLD.

[770]

**PLANTING.**

MANAGER —Position wanted as Plantation Manager in Cuba by American who has recently completed contract in Mexico, planting Rubber, Coffee, Vanilla and Sugar, and prefers Cuba as a place of residence. Best of references. Address E. A. K., Havana Post, Havana, Cuba.

[771]

**Ekert Chemical Laboratories, Ashland, Ohio.**

CORRECT analytic and technical work after modern methods; important manufacturing advices and improvements connected with the rubber trade; Lead, Antimony, Zinc, Lithopone, etc., compounds mixed without any trouble; produce cheap rubber-like substitutes; positive prevention of boiler incrustations. Correspondence solicited.

[778]



## Small Advertisement Department.

### SITUATIONS OPEN.

**CALENDER MAN.**—Wanted a man to work in a Rubber Shoe factory; must have plenty of experience and be able to furnish compounds and understand thoroughly, systems used in connection with this department. Fine opportunity for the right man. Address **CALENDER MAN**, THE INDIA RUBBER WORLD. [755]

**FOREMAN.**—Wanted an experienced mill room Foreman familiar with Machinery, capable of handling Bagging and packing work in factory. Address **E. M.**, care of THE INDIA RUBBER WORLD. [752]

**FOREMAN.**—Wanted an experienced hose room Foreman of steady habits, systematic, understanding manufacture of all kinds including railroad specification goods. Address **E. M.**, care of THE INDIA RUBBER WORLD. [753]

**FOREMAN.**—Wanted a Foreman of experience in the manufacture of long length solid Carriage Tires; acquainted with qualities and cures and able to handle a considerable number of men. Address **A. N.**, care of THE INDIA RUBBER WORLD. [754]

**SALESMAN WANTED** with experience in Mechanical Rubber Goods and Packings. For the right party, with established trade, a good position is open. Address **S. A. L.**, care of THE INDIA RUBBER WORLD. [756]

**SALESMAN WANTED** with established trade on Mechanical Rubber Goods and Packings for the Southern states. One who is desirous of connecting himself with an up-to-date house. State age, territory travelled, and approximate amount of sales for a given year. Correspondence confidential. Address **E. S. M.**, care of THE INDIA RUBBER WORLD. [757]

**WANTED**—Mechanical Rubber Factory wants two Salesmen who command trade and can sell goods; one Cost Clerk, competent to take full charge of factory records; an energetic, hustling Superintendent to take charge of entire factory; must be thoroughly competent. Very liberal compensation to right men who can show results; also up-to-date correspondence man with general office experience to take charge of this department. Address **RUBBER MANUFACTURER**, P. O. Box 142, Akron, Ohio. [751]

**WANTED** by the Canadian Rubber Co. of Montreal, reliable men, well recommended and thoroughly experienced in lining varieties of cotton hose. Answer in care of THE INDIA RUBBER WORLD. [758]

### SITUATIONS WANTED.

**ASSISTANT SUPERINTENDENT OR CHEMIST.**—Position wanted by a man experienced as Chemist in the manufacture of rubber covered Insulated Wire, thoroughly familiar with the mechanical details of the business and with testing. Would accept position in this or in any other branch of the rubber industry. Full references as to character and ability and to past record. Address **R. M. H.**, care of THE INDIA RUBBER WORLD. [759]

**HARD RUBBER** man of 24 years' experience is open for a position. Have many compounds; can handle article from the raw material to the finished product; compounding, mill work, vulcanizing, calendering, etc.; can grind rubber, polish, mould, and press; an expert turner; also make Electric Tapes, insulated wires; thorough mechanic on rubber machinery, setting up, etc. Address **B. C. A.**, care of THE INDIA RUBBER WORLD. [760]

**PRACTICAL SUPERINTENDENT**—Wanted position as Superintendent with reliable firm in the Mechanical line, where honest effort and a disposition to hustle and attain best results will be appreciated. 20 years' experience in all branches of Tires and Sundries. Address **EXECUTIVE**, care of THE INDIA RUBBER WORLD. [762]

**SUPERINTENDENT.**—Middle aged man, remarkably successful in manufacturing Mechanical Goods and Tires of all descriptions, wishes to form new connection with reliable firm, or party with capital to start in the rubber business. Address **F. G.**, care of THE INDIA RUBBER WORLD. [721]

**WANTED** by a man of good address, who has charge of purchasing department for rubber factory, a similar position. Perfectly familiar with all factory and office details. Address **G.**, care of THE INDIA RUBBER WORLD. [761]

**WANTED.**—Position by a man of long experience in the wholesale general rubber business, who can also keep a set of books in good shape. Address **H.**, care of THE INDIA RUBBER WORLD. [763]

### Rubber Mill Machinery For Sale.

**ONE** new Birmingham Spreader, size 50", brand new, never taken out of the case it was shipped in from the factory; one Centrifugal Machine, size about 50" diameter; one large Engine, cylinder 24" x 46", made by Wright, Newburg, in the best condition; both steam and hydraulic Pumps; seven hydraulic Presses, 30" x 30"; three hand Presses, used in making Heels; seven 12" x 36" Grinders; one 15" x 24" Cracker; one 10" x 20" Cracker; one 18" x 40" Calender; one five roll 12" x 44" Calender; fifty Solid Tire Molds (Kelly style), with all sizes of cavities; Bicycle Tire Molds; Pneumatic Tire Molds, and a large lot of other Molds; about 30 tons of Shafting, Pulleys, Hangers; No. 2 Royle Tubing Machine; Boilers, Piping and other kinds of Rubber Mill Machinery; One large Cedar Tank, 23 ft. diameter, 23 ft. high, cedar 3" thick, 13 large iron bands; almost new, and in the best condition; One Box Nailing Machine.

Two Devulcanizers, will stand 125 lbs. working pressure, 6 ft. diameter, 25 ft. long; one Devulcanizer 5 ft. diameter, 25 ft. long, shell one inch thick, complete with tracks and cars; five lead lined Tanks and Washers; four Crackers, 12" x 24"; four Mills, 15" x 36", all complete with shafting, bearings, clutches, etc.; one Hydraulic 9" Ram, 4 opening Press, size of platens 30" x 30"; one two opening Boomer & Boschert Press, size of platens 48" x 48".

**Good** Rubber Mill equipment, such as extra Gears, Frames, and Rolls, coming in. **PHILIP McGRORY**, Trenton, New Jersey.

### MACHINERY FOR SALE.

Opportunity to buy first class rubber machinery at low prices. One 4 x 6 asbestos covered steam vulcanizer, high pressure, practically new; one 48 x 48 double screw steam power vulcanizing press; one 9 x 17 tin mill in fine condition; polishing and buffing machinery, shafts, pulleys, large and small belting; also comb sawing machinery complete; a fine assortment of comb molds for Hard Rubber work; also a 90 h. p. Corliss Engine in fine condition, 15 x 36 cylinder; also a lot of gasket molds. Apply for further particulars to **THOMAS F. STEVENSON**, 120 Liberty Street, New York, or to the **BROOKLYN HARD RUBBER CO.**, 397 Sumner Avenue, Brooklyn, New York. [765]

### SECOND HAND MACHINERY.

IF it's about second hand Rubber Machinery, write us; if about Scrap Iron, write our competitors, as we do not buy Machinery that is unfit for use. A point to those who want to buy: "We handle all kinds." **W. C. COLEMAN CO.**, Setauket (Long Island), New York.

### FOR SALE.

**ALL KINDS RUBBER WASTE.**—We sell at low price, pure unvulcanized Rubber Scrap from Cement Waste. Write for free sample. Best cash prices paid for rubber scrap and waste. Old Wringer Rolls bought and sold a specialty. **UNITED STATES WASTE RUBBER CO.**, No. 487 N. Warren avenue, Brockton, Mass.

**FOR SALE.**—First-class Cement Churns or Mixers at half value. Address **JOSEPH WHITNEY**, 48 North Front St., Philadelphia Pa. [680]

**FOR SALE.**—Six Steam Jacketed Tire Molds (new); lot of short rolls Belting (new). Address **A. B.**, care of THE INDIA RUBBER WORLD. [767]

### American Representative Wanted.

**WANTED**—By a large crude rubber importing house in Europe, a man to represent them in the United States; headquarters to be in New York. All correspondence confidential. Address **L. S. R.**, care of "The India Rubber World." [764]

## RUBBER SCRAP AND WASTE.

**COMPETENT REPRESENTATIVE** desired in the American Trade, for a Well Established house. **MARTIN JACOBSON**, Veteranenstrasse 7, BERLIN, N. 54, Germany. [769]

**THE COLORADO RUBBER PLANT.** BY O. J. KENNEDY, SECRETARY. Published by the U. S. Bureau of Plant Industry. (Pamphlet 8vo. Pp. 16. Price 25 cents.)

A HISTORY of the discovery of the plant; information as to its culture, growth, and profits. [766]

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**MILL ARCHITECT and ENGINEER,**  
RUBBER FACTORY ENGINEERING.  
101 TREMONT STREET, BOSTON, MASS.



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Canadian Rubber Co. of Montreal.  
Chicago Rubber Wks., Chicago.  
Cleveland Rubber Co., Cleveland, O.  
Combination Rubber Mfg. Co., Bloomfield, N. J.  
Continental Caoutchouc & Gutta-percha Co., Hanover, Germany.  
Empire Rubber Mfg. Co., Trenton, N. J.  
Eureka Fire Hose Co., New York.  
Eureka Rubber Mfg. Co. of Trenton.  
B. F. Goodrich Co., Akron, O.  
Gutta Percha & Rubber Mfg. Co., N. Y.  
Gutta Percha & Rubber Mfg. Co., Toronto.  
Home Rubber Co., Trenton, N. J.  
Lake Shore Rubber Co., Erie, Pa.  
Liverpool Rubber Co., Liverpool, Eng.  
Manhattan Rubber Mfg. Co., New York.  
Mechanical Rubber Co., New York.  
N. J. Car Spring & Rubber Co., Jersey City, N. J.  
New York Belting & Packing Co., N. Y.  
New York Rubber Co., New York.  
North British Rubber Co., Ltd., Edinburgh.  
Peerless Rubber Mfg. Co., New York.  
Republic Rubber Co., Youngstown, Ohio.  
Revere Rubber Co., Boston.

## MECHANICAL GOODS.

Jos. Stokes Rubber Co., Trenton, N. J.  
Trenton Rubber Mfg. Co., Trenton, N. J.  
Voorhees Rubber Mfg. Co., Jersey City.

### Air Brake Hose.

Boston Belting Co., Boston-New York.  
Boston Woven Hose & Rubber Co.  
Canadian Rubber Co. of Montreal.  
Combination Rubber Mfg. Co., Bloomfield, N. J.  
Eureka Rubber Mfg. Co. of Trenton.  
B. F. Goodrich Co., Akron, O.  
Home Rubber Co., Trenton, N. J.  
N. J. Car Spring & Rubber Co., Jersey City.  
Peerless Rubber Mfg. Co., New York.  
Republic Rubber Co., Youngstown, Ohio.  
Revere Rubber Co., Boston-New York.  
Voorhees Rubber Mfg. Co., Jersey City.

### Belting (Canvas).

Boston Woven Hose & Rubber Co.  
Canadian Rubber Co. of Montreal.  
Eureka Fire Hose Co., New York.  
Peerless Rubber Mfg. Co., New York.  
Revere Rubber Co., Boston-New York.

### Billiard Cushions.

Boston Belting Co., Boston.  
Canadian Rubber Co. of Montreal.  
Combination Rubber Mfg. Co., Bloomfield, N. J.  
B. F. Goodrich Co., Akron, O.  
Manhattan Rubber Mfg. Co., New York.  
New York Belting & Packing Co., Ltd.  
New York Rubber Co., New York.  
Revere Rubber Co., Boston-New York.

### Blankets—Printers'.

Boston Belting Co., Boston.  
Canadian Rubber Co. of Montreal.  
Hodgman Rubber Co., New York.  
Liverpool Rubber Co., Liverpool, Eng.  
N. J. Car Spring & Rubber Co., Jersey City, N. J.  
Revere Rubber Co., Boston-New York.  
Voorhees Rubber Mfg. Co., Jersey City.

## MECHANICAL GOODS.

### Brushes.

C. J. Bailey & Co., Boston.

### Buffers.

Boston Belting Co., Boston-New York.  
Canadian Rubber Co. of Montreal.  
Liverpool Rubber Co., Ltd., Liverpool.

### "Bull Dog" Packing.

Boston Woven Hose & Rubber Co.

### Card Cloths.

Canadian Rubber Co. of Montreal.  
Mechanical Fabric Co., Providence, R. I.

### Carriage Mats.

Boston Belting Co., Boston-New York.  
Boston Woven Hose & Rubber Co.  
Canadian Rubber Co. of Montreal.  
B. F. Goodrich Co., Akron, O.  
Home Rubber Co., Trenton, N. J.  
N. J. Car Spring & Rubber Co., Jersey City, N. J.  
Peerless Rubber Mfg. Co., New York.  
Voorhees Rubber Mfg. Co., Jersey City.

### Coin Mats.

Canadian Rubber Co. of Montreal.  
Faultless Rubber Co., Akron, Ohio.  
B. F. Goodrich Co., Akron, O.  
N. J. Car Spring & Rubber Co., Jersey City, N. J.  
New York Belting & Packing Co., N. Y.

### Cord (Pure Rubber).

Boston Belting Co., Boston-New York.  
Boston Woven Hose & Rubber Co.  
Cleveland Rubber Co., Cleveland, O.  
Davol Rubber Co., Providence, R. I.  
Empire Rubber Mfg. Co., Trenton, N. J.  
Home Rubber Co., Trenton, N. J.  
Manhattan Rubber Mfg. Co., New York.  
N. J. Car Spring & Rubber Co., Jersey City, N. J.  
New York Belting & Packing Co., N. Y.  
Peerless Rubber Mfg. Co., New York.  
Republic Rubber Co., Youngstown, O.  
Revere Rubber Co., Boston-New York.  
Voorhees Rubber Mfg. Co., Jersey City.

## MECHANICAL GOODS.

### Deckle Straps.

Boston Belting Co., Boston.  
Liverpool Rubber Co., Liverpool, Eng.  
Mechanical Rubber Co., Chicago.  
New York Belting & Packing Co., N. Y.  
Republic Rubber Co., Youngstown, O.  
Revere Rubber Co., Boston-New York.

### "Dods" Packing.

Bowers Rubber Co., San Francisco, Cal.

### Door Springs.

Hodgman Rubber Co., New York.

### Dredging Sleeves.

Boston Belting Co., Boston-New York.  
Boston Woven Hose & Rubber Co.  
B. F. Goodrich Co., Akron, O.  
Home Rubber Co., Trenton, N. J.  
N. J. Car Spring & Rubber Co., Jersey City.  
Republic Rubber Co., Youngstown, O.

### Fleshing Bands.

Republic Rubber Co., Youngstown, O.

### Force Cups.

Hodgman Rubber Co., New York.

"Forsyth" Combination Packing.  
Boston Belting Co., Boston-New York.

### Fruit Jar Rings.

Boston Woven Hose & Rubber Co.  
Canadian Rubber Co. of Montreal.  
Cleveland Rubber Co., Cleveland, O.  
B. F. Goodrich Co., Akron, O.  
Empire Rubber Mfg. Co., Trenton, N. J.  
Eureka Rubber Mfg. Co. of Trenton, N. J.  
Manhattan Rubber Mfg. Co., New York.  
Republic Rubber Co., Youngstown, Ohio.  
New York Belting & Packing Co., N. Y.

### Fuller Balls.

B. F. Goodrich Co., Akron, O.  
N. J. Car Spring & Rubber Co., Jersey City.



## RUBBER BUYERS' DIRECTORY—CONTINUED.

## MECHANICAL GOODS.

## Fuller Balls—Continued.

Peerless Rubber Mfg. Co., New York.  
Republic Rubber Co., Youngstown, O.

## Gage Glass Washers.

Boston Belting Co., Boston, Mass.  
Canadian Rubber Co. of Montreal.  
Cleveland Rubber Co., Cleveland, O.  
Empire Rubber Mfg. Co., Trenton, N. J.  
Home Rubber Co., Trenton, N. J.  
Liverpool Rubber Co., Liverpool, Eng.  
Manhattan Rubber Mfg. Co., New York.  
Mechanical Rubber Co., Chicago, Ill.  
N. J. Car Spring & Rubber Co., Jersey City, N. J.  
New York Belting & Packing Co., N. Y.  
New York Rubber Co., New York.  
Revere Rubber Co., Boston, Mass.  
Jos. Stokes Rubber Co., Trenton, N. J.  
Voorhees Rubber Mfg. Co., Jersey City, N. J.

## Gas-Bags (Rubber).

Canadian Rubber Co. of Montreal.  
Cleveland Rubber Co., Cleveland, O.  
Davol Rubber Co., Providence, R. I.  
B. F. Goodrich Co., Akron, O.  
Liverpool Rubber Co., Liverpool, Eng.  
N. J. Car Spring & Rubber Co., Jersey City, N. J.  
Peerless Rubber Mfg. Co., New York.  
Tyer Rubber Co., Andover, Mass.  
Voorhees Rubber Mfg. Co., Jersey City.

## Gasket Tubing.

Canadian Rubber Co. of Montreal.  
Jenkins Bros., New York.

## Hat Bags.

Boston Belting Co., Boston.  
Canadian Rubber Co. of Montreal.  
Home Rubber Co., Trenton, N. J.  
Manhattan Rubber Mfg. Co., New York.  
Mattson Rubber Co.  
Mechanical Rubber Co., Chicago.  
N. J. Car Spring & Rubber Co., Jersey City, N. J.  
New York Belting & Packing Co., N. Y.  
New York Rubber Co., New York.  
Peerless Rubber Mfg. Co., New York.  
Republic Rubber Co., Youngstown, O.  
Revere Rubber Co., Boston.

## Horse Shoe Pads.

Canadian Rubber Co. of Montreal.  
Home Rubber Co., Trenton, N. J.  
Peerless Rubber Mfg. Co., New York.  
Plymouth Rubber Co., Stoughton, Mass.  
Revere Rubber Co., Boston-New York.  
Voorhees Rubber Mfg. Co., Jersey City.

## Hose—Armored.

## Hose—Wire Wound.

Boston Belting Co., Boston-New York.  
Boston Woven Hose & Rubber Co.  
Canadian Rubber Co. of Montreal.  
B. F. Goodrich Co., Akron, O.  
N. J. Car Spring & Rubber Co., Jersey City.  
Peerless Rubber Mfg. Co., New York.  
Republic Rubber Co., Youngstown, O.  
Revere Rubber Co., Boston-New York.  
Voorhees Rubber Mfg. Co., Jersey City.

## Hose Couplings and Fittings.

Boston Woven Hose & Rubber Co.  
Canadian Rubber Co. of Montreal.

## Hose Linings.

Boston Belting Co., Boston-New York.  
Boston Woven Hose & Rubber Co.  
Empire Rubber Mfg. Co., Trenton, N. J.  
Eureka Rubber Mfg. Co., Trenton, N. J.  
N. J. Car Spring & Rubber Co., Jersey City, N. J.  
Peerless Rubber Mfg. Co., New York.

## Hose—Protected.

Boston Belting Co., Boston-New York.  
Revere Rubber Co., Boston-New York.  
Voorhees Rubber Mfg. Co., Jersey City.

## Hose Racks and Reels.

Wirt & Knox Mfg. Co., Philadelphia.

## Hose—Rubber Lined.

Boston Belting Co., Boston-New York.  
Boston Woven Hose & Rubber Co.

## MECHANICAL GOODS.

## Hose—Rubber Lined—Continued.

COTTON AND LINES.

Canadian Rubber Co. of Montreal.  
Cleveland Rubber Co., Cleveland, O.  
Empire Rubber Mfg. Co., Trenton, N. J.  
Eureka Fire Hose Co., New York.  
Eureka Rubber Mfg. Co. of Trenton.  
B. F. Goodrich Co., Akron, O.  
Gutta Percha & Rubber Mfg. Co., N. Y.  
Gutta Percha and Rubber Mfg. Co. of Toronto.  
Home Rubber Co., Trenton, N. J.  
Manhattan Rubber Mfg. Co., New York.  
N. J. Car Spring & Rubber Co., Jersey City, N. J.  
New York Belting & Packing Co., N. Y.  
Peerless Rubber Mfg. Co., New York.  
Republic Rubber Co., Youngstown, O.  
Revere Rubber Co., Boston.  
Jos. Stokes Rubber Co., Trenton, N. J.  
Voorhees Rubber Mfg. Co., Jersey City.

## Hose—Submarine.

Boston Belting Co., Boston-New York.  
B. F. Goodrich Co., Akron, O.  
Republic Rubber Co., Youngstown, O.

## "Jenkins '96" Packing.

Jenkins Bros., New York.

## Lawn Sprinklers.

Boston Woven Hose & Rubber Co.  
Canadian Rubber Co. of Montreal.

## Mallets (Rubber).

Boston Belting Co., Boston-New York.  
B. F. Goodrich Co., Akron, O.  
Peerless Rubber Mfg. Co., New York.  
Revere Rubber Co., Boston-New York.

## Mould Work.

[See Mechanical Rubber Goods.]  
Davidson Rubber Co., Boston.  
Davol Rubber Co., Providence, R. I.  
Faultless Rubber Co., Akron, O.  
Hardman Rubber Co., Belleville, N. J.  
Hodgman Rubber Co., New York.  
La Crosse (Wis.) Rubber Mills Co.  
Mattson Rubber Co., New York.  
Mittel Rubber Co., Akron, O.  
National India Rubber Co., Bristol, R. I.  
Plymouth Rubber Co., Stoughton, Mass.  
Tyer Rubber Co., Andover, Mass.

## "Nubian" Packing.

Voorhees Rubber Mfg. Co., Jersey City.

## Oil Well Supplies.

Boston Belting Co., Boston-New York.  
Boston Woven Hose & Rubber Co.  
B. F. Goodrich Co., Akron, O.  
Home Rubber Co., Trenton, N. J.  
Lake Shore Rubber Co., Erie, Pa.  
N. J. Car Spring & Rubber Co., Jersey City.  
Peerless Rubber Mfg. Co., New York.  
Republic Rubber Co., Youngstown, O.  
Revere Rubber Co., Boston-Pittsburgh.  
Voorhees Rubber Mfg. Co., Jersey City.

## Paper Machine Rollers.

Boston Belting Co., Boston-New York.  
B. F. Goodrich Co., Akron, O.  
Republic Rubber Co., Youngstown, O.  
Revere Rubber Co., Boston-New York.  
Peerless Rubber Mfg. Co., New York.  
Voorhees Rubber Mfg. Co., Jersey City.

## "Perfection" Belting.

Boston Woven Hose & Rubber Co.

## Plumbers' Supplies.

Canadian Rubber Co. of Montreal.  
B. F. Goodrich Co., Akron, O.  
Republic Rubber Co., Youngstown, O.

## Pump Valves.

[See Mechanical Rubber Goods.]  
Jenkins Bros., New York.

## "Rainbow" Packing.

Peerless Rubber Mfg. Co., New York.

## Rings.

Boston Belting Co., Boston-New York.  
B. F. Goodrich Co., Akron, O.  
Peerless Rubber Mfg. Co., New York.  
Plymouth Rubber Co., Stoughton, Mass.  
Republic Rubber Co., Youngstown, O.

## MECHANICAL GOODS.

## Rollers—Rubber Covered.

Boston Belting Co., Boston.  
Canadian Rubber Co. of Montreal.  
Cleveland Rubber Co., Cleveland, O.  
Empire Rubber Mfg. Co., Trenton, N. J.  
Eureka Rubber Mfg. Co. of Trenton.  
B. F. Goodrich Co., Akron, O.  
Home Rubber Co., Trenton, N. J.  
Manhattan Rubber Mfg. Co., New York.  
Mechanical Rubber Co., Chicago.  
N. J. Car Spring & Rubber Co., Jersey City, N. J.  
New York Belting & Packing Co., N. Y.  
Peerless Rubber Mfg. Co., New York.  
Plymouth Rubber Co., Stoughton, Mass.  
Republic Rubber Co., Youngstown, O.  
Revere Rubber Co., Boston-New York.

## Sewing Machine Rubbers.

B. F. Goodrich Co., Akron, O.

## Springs—Rubber.

Boston Belting Co., Boston-New York.  
Canadian Rubber Co. of Montreal.  
B. F. Goodrich Co., Akron, O.  
Hardman Rubber Co., Belleville, N. J.  
Liverpool Rubber Co., Liverpool, Eng.  
N. J. Car Spring & Rubber Co., Jersey City.  
Peerless Rubber Mfg. Co., New York.  
Plymouth Rubber Co., Stoughton, Mass.  
Republic Rubber Co., Youngstown, O.  
Revere Rubber Co., Boston-New York.  
Voorhees Rubber Mfg. Co., Jersey City.

## Stair Treads.

Boston Belting Co., Boston-New York.  
Boston Woven Hose & Rubber Co.  
Canadian Rubber Co. of Montreal.  
Cleveland Rubber Co., Cleveland, O.  
Empire Rubber Mfg. Co., Trenton, N. J.  
Home Rubber Co., Trenton, N. J.  
Liverpool Rubber Co., Liverpool, Eng.  
Manhattan Rubber Mfg. Co., New York.  
N. J. Car Spring & Rubber Co., Jersey City, N. J.  
New York Belting & Packing Co., N. Y.  
New York Rubber Co., New York.  
Peerless Rubber Mfg. Co., New York.  
Republic Rubber Co., Youngstown, O.  
Revere Rubber Co., Boston-New York.  
Voorhees Rubber Mfg. Co., Jersey City.

## Thread.

Mechanical Fabric Co., Providence, R. I.  
Revere Rubber Co., Boston.

## Tiling.

Canadian Rubber Co. of Montreal.  
B. F. Goodrich Co., Akron, O.  
Gutta Percha & Rubber Mfg. Co., N. Y.  
N. J. Car Spring & Rubber Co., Jersey City.  
New York Belting & Packing Co., N. Y.  
Peerless Rubber Mfg. Co., New York.  
Republic Rubber Co., Youngstown, Ohio.  
Voorhees Rubber Mfg. Co., Jersey City.

## Tires.

AUTOMOBILE, BICYCLE, AND CARRIAGE.  
Canadian Rubber Co. of Montreal.  
Continental Caoutchouc & Guttapercha Co., Hanover.  
Empire Rubber Mfg. Co., Trenton, N. J.  
B. F. Goodrich Co., Akron, O.  
Gutta Percha & Rubber Mfg. Co., Toronto.  
Kokomo Rubber Co., Kokomo, Ind.  
Lake Shore Rubber Co., Erie, Pa.  
Liverpool Rubber Co., Liverpool, Eng.  
North British Rubber Co., Ltd., Edinburgh.  
Plymouth Rubber Co., Stoughton, Mass.  
Republic Rubber Co., Youngstown, O.

## AUTOMOBILE AND CARRIAGE.

Boston Belting Co., Boston-New York.  
Revere Rubber Co., Boston-New York.  
Eureka Rubber Mfg. Co., Trenton, N. J.

## Truck Bands.

Boston Belting Co., Boston.  
Cleveland Rubber Co., Cleveland, O.  
Empire Rubber Mfg. Co., Trenton, N. J.  
B. F. Goodrich Co., Akron, O.  
Home Rubber Co., Trenton, N. J.  
Manhattan Rubber Mfg. Co., New York.  
Mechanical Rubber Co., Chicago.  
N. J. Car Spring & Rubber Co., Jersey City, N. J.

## MECHANICAL GOODS.

## Truck Bands—Continued.

New York Belting & Packing Co., N. Y.  
Peerless Rubber Mfg. Co., New York.  
Republic Rubber Co., Youngstown, O.  
Voorhees Rubber Mfg. Co., Jersey City.

## Tubing.

[See Mechanical Rubber Goods.]

American Hard Rubber Co., New York.  
Davidson Rubber Co., Boston.  
Davol Rubber Co., Providence, R. I.  
Hardman Rubber Co., Belleville, N. J.  
Plymouth Rubber Co., Stoughton, Mass.  
Tyer Rubber Co., Andover, Mass.

## Tubing (Beer).

Boston Belting Co., Boston-New York.  
Boston Woven Hose & Rubber Co.  
Canadian Rubber Co. of Montreal.  
Faultless Rubber Co., Akron, Ohio.  
B. F. Goodrich Co., Akron, O.  
Peerless Rubber Mfg. Co., New York.  
Plymouth Rubber Co., Stoughton, Mass.  
Republic Rubber Co., Youngstown, O.  
Voorhees Rubber Mfg. Co., Jersey City.

## "Usudurian" Packing.

Revere Rubber Co., Boston-New York.

## Valve Balls.

Boston Belting Co., Boston.  
Cleveland Rubber Co., Cleveland, O.  
Manhattan Rubber Mfg. Co., New York.  
Mechanical Rubber Co., Chicago.  
New York Belting & Packing Co., N. Y.  
New York Rubber Co., New York.  
Peerless Rubber Mfg. Co., New York.  
Republic Rubber Co., Youngstown, O.

## Valve Discs.

American Hard Rubber Co., New York.  
Boston Belting Co., Boston-New York.  
B. F. Goodrich Co., Akron, O.  
Peerless Rubber Mfg. Co., New York.  
Republic Rubber Co., Youngstown, O.  
Revere Rubber Co., Boston-New York.

## Valves.

[See Mechanical Rubber Goods.]  
Jenkins Bros., New York-Chicago.  
Plymouth Rubber Co., Stoughton, Mass.

## Wringer Rolls.

Canadian Rubber Co. of Montreal.  
Cleveland Rubber Co., Cleveland, O.  
B. F. Goodrich Co., Akron, O.  
Home Rubber Co., Trenton, N. J.  
Republic Rubber Co., Youngstown, O.

## DRUGGISTS' AND STATIONERS' SUNDRIES

## Atomizers.

## Bandages.

## Bulbs.

## Syringes.

## Water Bottles.

## Druggists' Sundries—General.

American Hard Rubber Co., New York.  
C. J. Bailey & Co., Boston.  
Geo. Borgfeldt & Co., New York.  
Boston Woven Hose & Rubber Co.  
Canadian Rubber Co. of Montreal.  
Cleveland Rubber Co., Cleveland, O.  
Davidson Rubber Co., Boston.  
Davol Rubber Co., Providence, R. I.  
Faultless Rubber Co., Akron, O.  
B. F. Goodrich Co., Akron, O.  
Hanover Rubber Co., Hanover, Germany.  
Hardman Rubber Co., Belleville, N. J.  
Hodgman Rubber Co., New York.  
Mittel Rubber Co., Akron, O.  
North British Rubber Co., Ltd., Edinburgh.  
Tyer Rubber Co., Andover, Mass.

## Balls, Dolls and Toys.

Geo. Borgfeldt & Co., New York.  
Canadian Rubber Co. of Montreal.  
Continental Caoutchouc & Guttapercha Co.  
B. F. Goodrich Co., Akron, O.  
Hanover Rubber Co., Hanover, Germany.  
New York Rubber Co., New York.



## RUBBER BUYERS' DIRECTORY—CONTINUED.

## DRUGGISTS' SUNDRIES

## Combs.

American Hard Rubber Co., New York  
Geo. Borgfeldt & Co., New York.  
Hanover Rubber Co., Hanover, Germany.

## Elastic Bands.

Canadian Rubber Co. of Montreal.  
Davidson Rubber Co., Boston.  
Daval Rubber Co., Providence, R. I.  
B. F. Goodrich Co., Akron, O.  
Hodgman Rubber Co., New York.  
Tyer Rubber Co., Andover, Mass.  
Whitman & Barnes Mfg. Co., Akron, O.

## Erasive Rubbers.

Davidson Rubber Co., Boston.  
B. F. Goodrich Co., Akron, O.  
Hardman Rubber Co., Belleville, N. J.  
Mattson Rubber Co., New York.

## Finger Cots.

Faultless Rubber Mfg. Co., Akron, O.  
B. F. Goodrich Co., Akron, O.  
Pure Gum Specialty Co., Barberton, O.

## Gloves.

Canadian Rubber Co. of Montreal.  
Daval Rubber Co., Providence, R. I.  
Faultless Rubber Co., Akron, O.  
B. F. Goodrich Co., Akron, O.  
Pure Gum Specialty Co., Barberton, O.

## Hard Rubber Goods.

American Hard Rubber Co., New York.  
Geo. Borgfeldt & Co., New York.  
Canadian Rubber Co. of Montreal.  
Daval Rubber Co., Providence, R. I.  
Hanover Rubber Co., Hanover, Germany.  
Hardman Rubber Co., Belleville, N. J.  
Stokes Rubber Co., Joseph, Trenton, N. J.  
Tyer Rubber Co., Andover, Mass.

## Hospital Sheetings.

Cleveland Rubber Co., Cleveland, O.  
Davidson Rubber Co., Boston.  
Daval Rubber Co., Providence, R. I.  
Hodgman Rubber Co., New York.  
Plymouth Rubber Co., Stoughton, Mass.  
Tyer Rubber Co., Andover, Mass.

## Hot Water Bottles.

[See Water Bottles.]

## Ice Bags and Ice Caps.

Faultless Rubber Co., Akron, Ohio.  
B. F. Goodrich Co., Akron, O.  
Hardman Rubber Co., Belleville, N. J.  
Pure Gum Specialty Co., Barberton, O.  
Tyer Rubber Co., Andover, Mass.

## Life Preservers.

Hodgman Rubber Co., New York.

## Nipples.

Canadian Rubber Co. of Montreal.  
Cleveland Rubber Co., Cleveland, O.  
Davidson Rubber Co., Boston.  
Daval Rubber Co., Providence, R. I.  
Faultless Rubber Co., Akron, O.  
B. F. Goodrich Co., Akron, O.  
Pure Gum Specialty Co., Barberton, O.  
Tyer Rubber Co., Andover, Mass.

## Sponges (Rubber).

Faultless Rubber Co., Ashland, Ohio.  
B. F. Goodrich Co., Akron, O.

## Stationers' Sundries.

American Hard Rubber Co., New York.  
Geo. Borgfeldt & Co., New York.  
Boston Woven Hose & Rubber Co.  
Canadian Rubber Co. of Montreal.  
Cleveland Rubber Co., Cleveland, O.  
Davidson Rubber Co., Boston.  
Daval Rubber Co., Providence, R. I.  
B. F. Goodrich Co., Akron, O.  
Hanover Rubber Co., Hanover, Germany.  
Hardman Rubber Co., Belleville, N. J.  
Hodgman Rubber Co., New York-Boston.  
Tyer Rubber Co., Andover, Mass.

## Stopples (Rubber).

Cleveland Rubber Co., Cleveland, O.  
Daval Rubber Co., Providence, R. I.  
Hodgman Rubber Co., New York.  
Manhattan Rubber Mfg. Co., New York.  
New York Belting & Packing Co., N. Y.  
Tyer Rubber Co., Andover, Mass.

## DRUGGISTS' SUNDRIES.

## Throat Bags.

Cleveland Rubber Co., Cleveland, O.  
Daval Rubber Co., Providence, R. I.  
B. F. Goodrich Co., Akron, O.  
Tyer Rubber Co., Andover, Mass.

## Tobacco Pouches.

Canadian Rubber Co. of Montreal.  
Faultless Rubber Co., Akron, Ohio.  
B. F. Goodrich Co., Akron, O.  
Pure Gum Specialty Co., Barberton, O.  
Tyer Rubber Co., Andover, Mass.

MACKINTOSHED  
AND SURFACE  
GOODS

## Air Goods (Rubber).

Canadian Rubber Co. of Montreal.  
Cleveland Rubber Co., Cleveland, O.  
Daval Rubber Co., Providence, R. I.  
B. F. Goodrich Co., Akron, O.  
Hodgman Rubber Co., New York.  
New York Rubber Co., New York.  
National India Rubber Co., Providence.  
Tyer Rubber Co., Andover, Mass.

## Air Mattresses.

Canadian Rubber Co. of Montreal.  
Mechanical Fabric Co., Providence, R. I.

## Barbers' Bibs.

Daval Rubber Co., Providence, R. I.  
Tyer Rubber Co., Andover, Mass.

## Bathing Caps.

Daval Rubber Co., Providence, R. I.  
B. F. Goodrich Co., Akron, O.

## Bellows Cloths.

Boston Rubber Co., Boston.  
Cleveland Rubber Co., Cleveland, O.  
Hodgman Rubber Co., New York.  
La Crosse (Wis.) Rubber Mills Co.

## Calendering.

La Crosse (Wis.) Rubber Mills Co.  
Plymouth Rubber Co., Stoughton, Mass.

## Carriage Ducks and Drills.

Cleveland Rubber Co., Cleveland, O.  
Empire Rubber Mfg. Co., Trenton, N. J.  
Eureka Rubber Mfg. Co. of Trenton.  
Gutta Percha & Rubber Mfg. Co., Toronto.

## Clothing.

Apsley Rubber Co., Hudson, Mass.  
Canadian Rubber Co. of Montreal.  
Cleveland Rubber Co., Cleveland, O.  
Granby Rubber Co., Granby, Quebec.  
Gutta Percha & Rubber Mfg. Co. of Toronto.  
Hodgman Rubber Co., New York.  
La Crosse (Wis.) Rubber Mills Co.  
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[See Clothing.]

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La Crosse (Wis.) Rubber Mills Co.  
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Hood Rubber Co., Boston.  
Liverpool Rubber Co., Liverpool, Eng.  
Lycorning Rubber Co., Williamsport, Pa.  
Meyer Rubber Co., New York.  
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North British Rubber Co., Ltd., Edinburgh.  
United States Rubber Co., New York.  
Wales-Goodyear Rubber Co., Boston.  
Woonsocket Rubber Co., Providence.

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Continental Caoutchouc & Guttapercha Co., Hanover.  
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Granby Rubber Co., Granby, Quebec.  
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National India Rubber Co., Providence.  
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B. F. Goodrich Co., Akron, O.  
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## Chemists.

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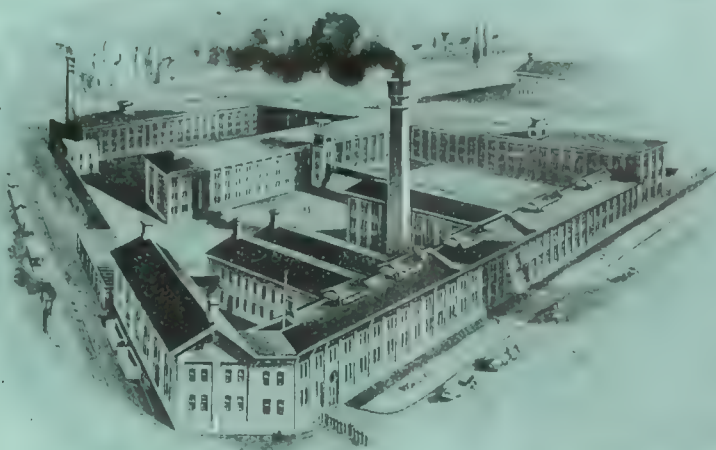
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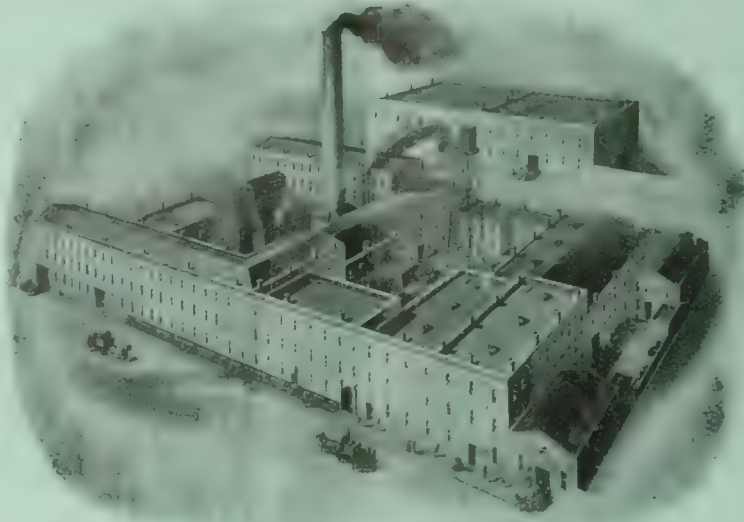


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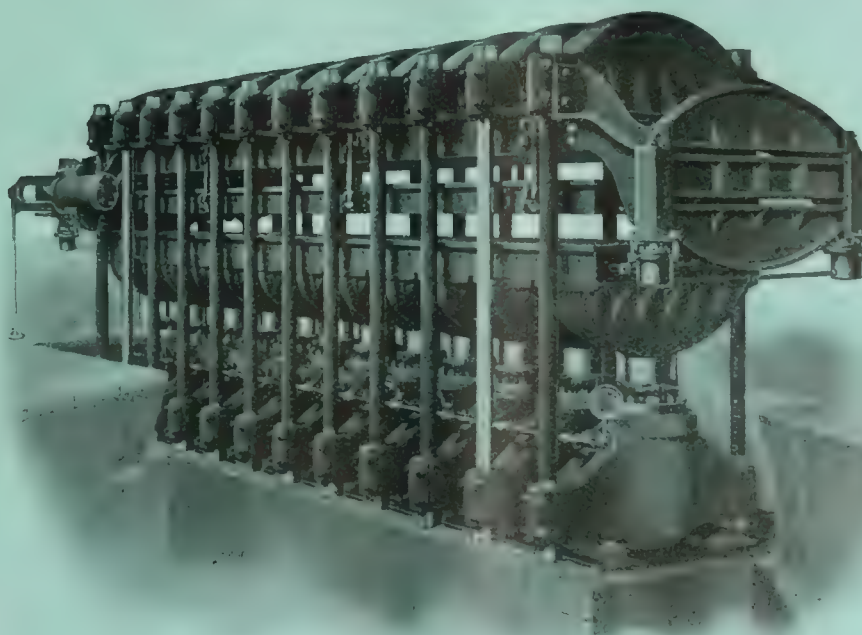
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FOR AUTOMOBILES, CARRIAGES AND BICYCLES.  
CARRIAGE CLOTH, CLOTHING AND PROOFING,  
PLUMBERS' GOODS, PATENT TILING,  
EVERYTHING IN RUBBER SPECIALITIES.

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We are always open to correspond  
with experienced Rubber men,  
both for Factory and Executive  
Work.



Inventions kindred to the Trade  
and ideas for development,  
invited. Our Development  
Department gives these matters  
special attention.

# Forsyth

TRADE MARK

## Combination Metal Insertion Packing and Gasket Tubing



PATENTED APRIL 11, 1899



A superior tubular gasket that is durable and will not blow out when properly applied. It makes gaskets of any size or shape without waste.

A RUBBER PACKING with one or more plies of pliable sheet metal insertion. Forsyth Combination Packing will satisfactorily withstand the heat of high pressure steam, and is not so liable to blow out as ordinary packings. It is practically a metal packing with elastic surfaces. A practical trial of Forsyth Combination Packing invariably results in a strong endorsement of it.

### CAUTION

As the exclusive manufacturers of sheet metal insertion rubber packing and gasket tubing, under a patent issued April 11, 1899, to James Bennett Forsyth, we caution all parties against manufacturing, selling or using any rubber packing with sheet metal insertion that in any way infringes said patent.

## BOSTON BELTING CO.

JAMES BENNETT FORSYTH, Mfg. Agt. and Gen. Mgr.

ORIGINAL  
MANUFACTURERS OF

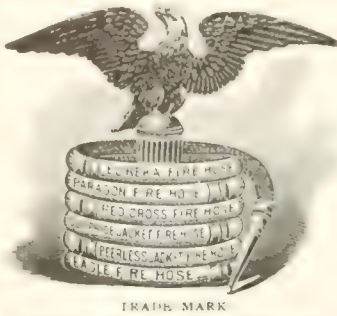
VULCANIZED RUBBER GOODS

ESTABLISHED  
1828

BOSTON NEW YORK BUFFALO CHICAGO ST. LOUIS SAN FRANCISCO

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TRADE MARK

AWARDED GOLD MEDAL  
at  
ST. LOUIS EXPOSITION,  
1904.

## EUREKA FIRE HOSE CO.,

13 BARCLAY ST., NEW YORK.

MANUFACTURERS OF THE CELEBRATED BRANDS

"RED CROSS" (<sup>2</sup>/<sub>Ply</sub>) "PARAGON" (<sup>3</sup>/<sub>Ply</sub>) "EUREKA" (<sup>4</sup>/<sub>Ply</sub>)  
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Adopted as the Standard Factory Fire Hose by the Associated Factory Mutual Fire Insurance Companies, for Factory and Mill Fire Protection.

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We Spin, Weave, and Line Our Own Goods.

## GARDEN HOSE,

New Lines—New Methods.

## BELTING and PACKING.

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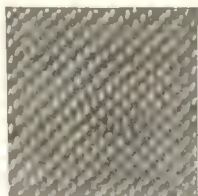
BOSTON.

ST. LOUIS, MO.

Factories: TRENTON, N. J.

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## DODS CROSS EXPANSION PISTON PACKING.



CROSS  
SECTION



PAT. MAR 11 1895

Dods Packing, made from high grade Rubber and Duck on the bias, placed at a diagonal from every side, has a cross expansion of 100 per cent.; it will hold steam or liquid when all others fail.

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MANUFACTURED BY

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42 Sacramento St.,

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ESTABLISHED 1870

ALEXANDER M. PAUL, General Manager



MANUFACTURERS OF

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Offices: BOSTON PHILADELPHIA BALTIMORE BUFFALO DETROIT ST. LOUIS MILWAUKEE

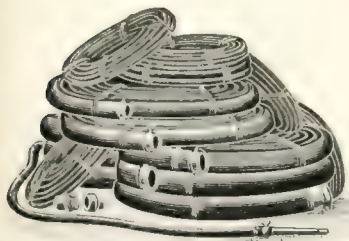


GOLD MEDAL FOR MECHANICAL RUBBER GOODS.  
HIGHEST AWARD FOR RUBBER BELTING.  
LOUISIANA PURCHASE EXPOSITION, ST. LOUIS, 1904.

"We ask no favors beyond a comparison of qualities and prices."



"All goods bearing our brands are fully guaranteed." : : :



"Our goods are manufactured for severe service."



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for the comfort and convenience of  
**TOURISTS AND CAMPER.**

**RUBBER GARMENTS** to meet every need;

Blankets, Ponchos and Sporting Boots,  
 Air Beds, Mattresses, Cushions and Boat Seats,  
 Silk and Rubber Pillows and Sponge Bags,

A Large Variety of other things besides.

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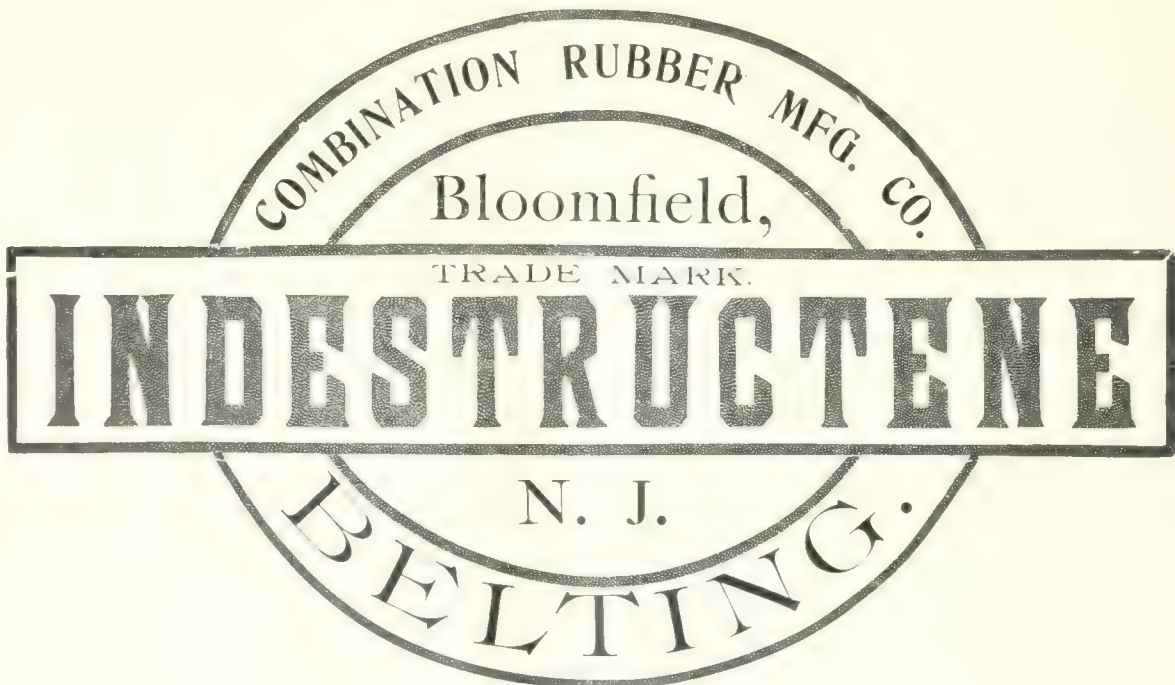
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806-808 BROADWAY  
 NEW YORK

ESTABLISHED  
 IN 1838

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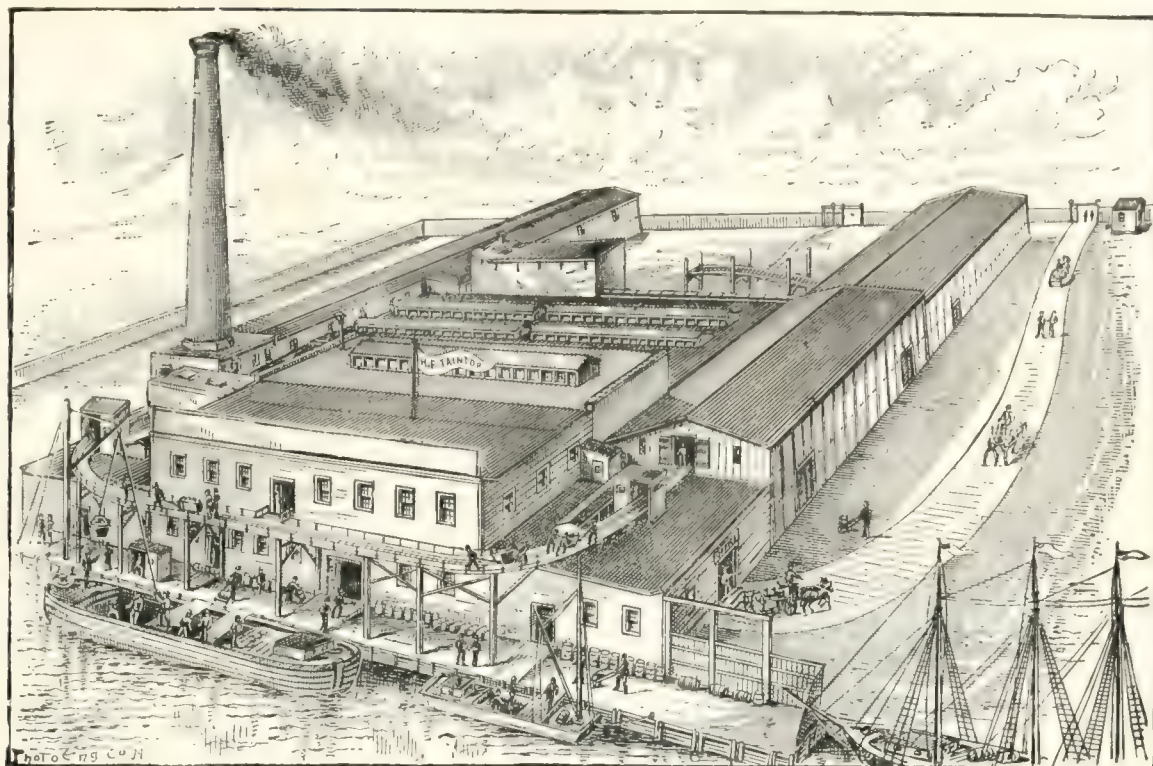
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PACKINGS, TUBING, &c.

HIGH GRADE  
**Mechanical Rubber Goods.**

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are the largest manufacturers of Whiting and English Cliffstone Paris White in this country.

All grades of Whiting prepared especially for use of Rubber Manufacturers, finely ground and bolted and *very* dry.

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Samples can be had by mail.

Address

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FACTORIES AT MATTEAWAN, DUTCHESS CO., N. Y.

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INCORPORATED 1851.

Manufacturers of

**BELTING,  
HOSE,  
PACKING,  
ETC.**

**OF SUPERIOR QUALITIES.**

**HIGH GRADE  
Lawn and Garden Hose  
A SPECIALTY.**

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Lawn and Garden Hose  
A SPECIALTY.**

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for Weaving and other uses

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of Woolen, Cotton and Rubber

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**Rubber Coated Cloths**  
Vulcanized or Unvulcanized for various purposes

CORRESPONDENCE SOLICITED

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Manufacture Mechanical Rubber Goods,

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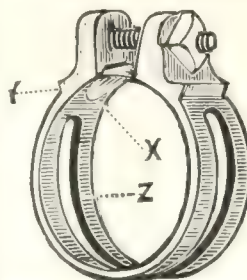
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NONE BETTER.

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KOKOMO, IND.

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**Verdon's Improved  
Double Hose Band....**  
SIMPLE, STRONG, SURE.

Send for Sample and Prices.

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BOUND YEARLY VOLUMES OF  
**THE INDIA RUBBER WORLD**  
FOR SALE AT THIS OFFICE.  
PRICE \$5 EACH, PREPAID.

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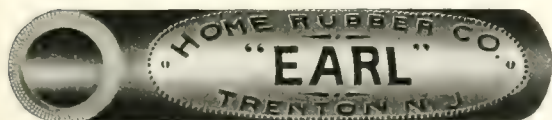
**Y**OU remember how it happened in 1903; everybody wanted HOSE at the same time and many didn't get it until too late.

This year the season will probably be short. You will therefore want immediate shipments.

We calculate on June being the big month and are fully prepared. WRITE OR WIRE US.

**TRENTON RUBBER MFG. CO.,**  
TRENTON, N. J.

## SOME OF OUR 1905 SPECIALTIES IN HOSE.



**HOME RUBBER CO.**  
TRENTON, N. J.



NEW YORK.

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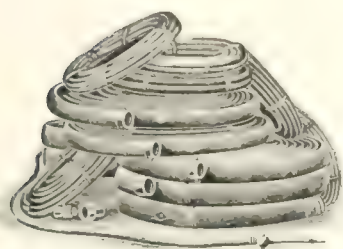
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## High Grade Rubber Goods

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Air Brake Hose Rubber Belting  
 Steam Hose Steam Packing  
 Fire Hose Mats and Matting  
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 Mechanical Rubber Goods for all purposes.

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ESTABLISHED 1859.

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*The highest grade of Rubber Boots and Shoes, "Liver" and "Ideal" Canvas Shoes, etc., etc.*

*High grade Mechanical, Engineering and Mill Work, Railway Springs, Valves, Buffers, Sheets, Insertion, Rings, Bladders, Deckles, Printers' Blankets, Hose, Belting, Mats, Packing, etc., etc.*

*Cycle and Carriage Tires, "Lockfast" pneumatic, single tube, cushion and solid.*  
*India Rubber Thread.*

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Factories: Vauxhall Road, and Walton, Liverpool.

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Manufacturers of  
**Rubber Carriage Drill and Duck, Cotton Rubber Lined Hose, and Mechanical Rubber Goods of Every Description.**

Factory strictly modern in design, with machinery of the latest and most approved description throughout using only first class raw material, and producing nothing but reliable grades.

We solicit inquiries from the trade direct, or through our Branch Stores or Salesmen. We promise prompt attention to same.

**FACTORY - - - TRENTON, N. J.**

**On the main line Pennsylvania R. R.**

**Branch Stores: CHICAGO:**  
**248 Randolph Street.**

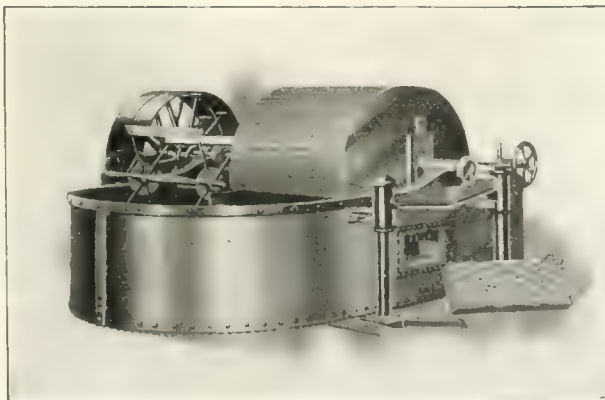
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**BOSTON:**  
**276 Devonshire Street.**

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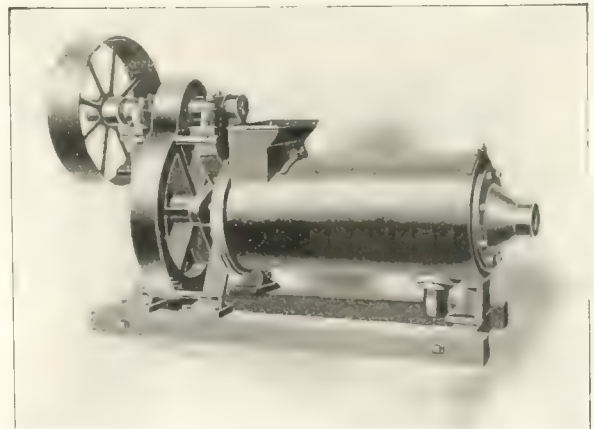
## NEW RUBBER MACHINERY

**WASHING MACHINE**  
*for Crude Rubber*



*Removes all Sand, Bark and Dirt. Try it for Centrals, Africans and Coarse Para. Rubber Planters; this will clean your Scrap Rubber.*

**WATER SEPARATOR**  
*for Reclaimed Rubber*



*Instead of Evaporating Tanks, use this. Takes 40% of the moisture out at once. Then a short time on the screens delivers the product bone dry.*

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*Write us*



On May 1, 1905, the general offices of our company will be removed to Passaic, N. J., in order to facilitate the handling of our business.

A stock of rubber goods will be kept on hand in our present store at 18 Vesey St., New York, and that office will remain as a fully equipped selling branch.

Please address all correspondence to us in Passaic, N. J.

THE MANHATTAN RUBBER MFG. CO.

 We Manufacture Our Products by Mechanical Means. 

**THE BLOOMINGDALE SOFT RUBBER WORKS,**

Manufacturers of

**THE FINEST GRADES OF**

**Reclaimed and Devulcanized Rubber**

**FOR**

**Manufacturing and Mechanical Purposes,**

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WIRT'S PATENT TUBULAR ALL METAL

**HOSE CARTS, REELS and HUMP RACKS**

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**CONTINENTAL TYRES,  
CONTINENTAL MECHANICAL RUBBER GOODS.**

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**Hanover, Germany.**

**NEW YORK OFFICE: 298 BROADWAY.**

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**For General Compounding**

"M.R." makes a perfect union with rubber. Prevents blistering, and the harsher action of free Sulphur. Absolutely acid proof. Has been used regularly by Rubber Manufacturers for the past four years.

Manufactured only by the AMERICAN ASPHALTUM & RUBBER CO., Chicago.

**GEO. A. ALDEN & CO., Boston, Mass.**



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ESTABLISHED 184

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**FINE  
RUBBER  
GOODS**

IN

**SOFT and HARD RUBBER**

**PROVIDENCE,  
R. I., U. S. A.**

PLANT OF THE DAVOL RUBBER COMPANY

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**DAVIDSON'S**  
**R** Syringes,  
**U** Atomizers,  
**G** Nipples,  
**I** Sheeting,  
**S Tubing,  
**T Urinals,  
**S** Water Bottles,  
Golf Balls,  
AND  
Special Goods To Order.****

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**High Grade Seamless and  
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and Specialties.**



CORRESPONDENCE SOLICITED.

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**Druggists' Sundries.  
Stationers' Rubber.  
Moulded Goods.  
Hard Rubber Goods.**

ESTIMATES CHEERFULLY FURNISHED

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TELEPHONE 1143a NEWARK

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## COMBS, SYRINGES, CROWN WATER BOTTLES, DRUGGISTS' & STATIONERS' SUNDRIES.

EVERY DESCRIPTION OF HARD RUBBER GOODS.

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Prussian Pure Rubber Sponges

**GLORIA**

TRADE MARK

None Better

The Hanover Rubber Co. (Ltd.)

Hannoversche Gummi  
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HANOVER-LIMMER  
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RUBBER BALLS  
PURE RED RUBBER TOYS  
RUBBER COMBS and  
RUBBER SUNDRIES

**Geo. Borgfeldt & Co.**

Sole Agents for U. S. and Can.

48-50 WEST 4th STREET  
NEW YORK

WE MANUFACTURE

# HARD RUBBER GOODS

IN EVERY CONCEIVABLE FORM.

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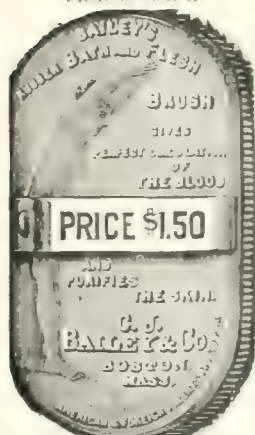
TRENTON, N. J.

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CHICAGO, ILL.

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TRADE MARK



Size 3 x 5 in

### REVISED PRICE LIST

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	PER DOZ.		PER DOZ.		PER DOZ.
Bailey's Rubber Bath Brush,	\$13.20	Bailey's Rub. Tooth Brush, No. 2,	\$2.75	Bailey's Rub. Glove Cleaner,	\$ .82
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" " Complexion "	4.40	" " Sewing Fingers,	\$5.20	" " Baby "	8.80 doz.
" " Petite Complexion Brush	2.00	" " Teething Ring,	.82	" " Complexion Soap,	.75 doz.
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" " Hand "	4.40	" " Soap Dishes,	2.20		
" " Toilet "	2.20	" " Trumpet,	1.20		
" " Tooth " No. 1	2.20	" " Bubble Blower,	.82		

Bailey's "Won't Slip" Crutch Tip, (all sizes) \$1.10 per doz. All Goods sent prepaid by us.

**C. J. BAILEY & CO.**

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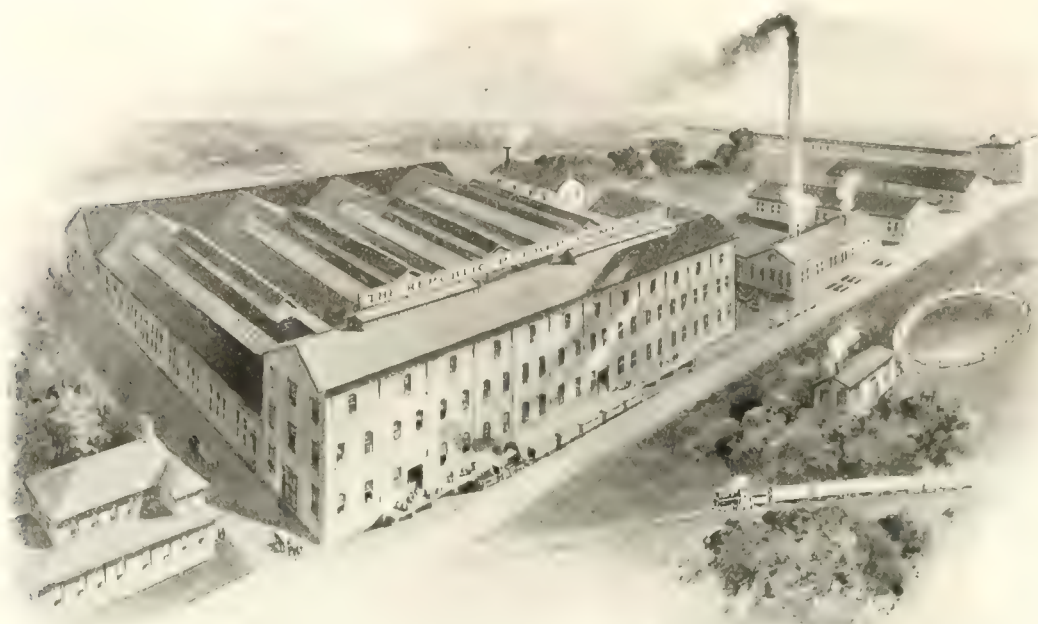
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BOSTON, MASS. U. S. A.



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## YOUNGSTOWN, OHIO.



THE MOST MODERN MECHANICAL RUBBER GOODS FACTORY IN EXISTENCE.

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Factory: Carrollton, O.

High Grade  
SEAMLESS, SEAMED AND  
MOULDED GOODS

Goods for CUSTOMERS EXCLUSIVELY a Specialty

ALL GOODS GUARANTEED

Write for Samples and Prices

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ESTABLISHED 1875

Moulded and Special Rubber Goods  
Stamp Gum and Sponge Rubber  
Rubber Goods for Hat Manufacturers  
Unvulcanized Compounds for the Trade  
Dress Shield Materials, Etc.

Correspondence solicited

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DRUGGISTS' RUBBER SUNDRIES  
AIR GOODS.

CORRESPONDENCE SOLICITED.

### SYRINGE BOXES

OF WHITE WOOD, BASS, OAK, ASH, &c  
FINE WORK. LOW PRICES. PROMPT SHIPMENT.

*Estimates and Samples Furnished on Application.*

ALSO ANY OTHER KIND OF

### FANCY WOOD BOXES MADE TO ORDER

Extensive Facilities enable us to Guarantee Satisfaction.

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SAID AN ENGINEER— "Yes, they did not know about valves at the time the plant was put in, but they do now. I am replacing all valves with the genuine Jenkins Bros."

#### BENJAMIN FRANKLIN SAID

"Experience keeps a dear school. Remember this: they that will not be counseled cannot be helped."

Start your plant with Jenkins Bros. Valves, and avoid trouble.  
JENKINS BROS., New York, Boston, Phila., Chicago, London



# THE NEW “AMERICAN” BERKELEY TOE

Arriving on the minute has always been a distinguishing characteristic of the “American” Rubber.

Whenever a new leather shoe comes to town you will find sitting next to it on the same seat an “American” Rubber that fits it perfectly.

The latest leather last is the Potay Toe, with a fairly narrow toe, and a full free swing at the ball of the foot.

The new “American” Berkeley Toe fits it to a hair.

If you carry the Potay leather shoe (it has sundry other names, but “Potay” covers the whole genus) you want the “American” Berkeley Toe Rubber to go with it.

## AMERICAN RUBBER CO.



# RAINBOW PACKING.

Makes a Steam Flange and Hot Water Joint Instantly.

Don't have to use wire and cloth  
to hold Rainbow.  
Can't blow it out.



Thousands of Imitators.  
No Equal.  
Will Hold Highest Pressure.

**THE COLOR OF RAINBOW PACKING IS RED.**

None Genuine without our Trade Mark, the word "Rainbow" in a Diamond in black in three rows of Diamonds extending throughout the entire length of each and every roll of Rainbow Packing.

## Peerless Rubber Fire Engine Hose.

We would call the attention of those desiring to purchase Fire Hose to the fact that we have in the New York Fire Department, Hose which has been in **constant use for over eight years and shows no sign of giving out.**

## Peerless Suction Hose.

Our Peerless Steel-Clad Suction Hose has become a general favorite among Firemen. It has been adopted as the standard by some of the largest City Fire Departments in the United States and foreign countries.  
We guarantee this hose in every respect, and can repair it when damaged.

## RUBBER HOSE.

CONDUCTING,  
GARDEN,

Peerless,  
Lakeside,  
Red Label,  
Crown,  
Knicker,

Made any diameter.



ENGINE,  
HYDRANT.

Rainbow Ribbon,  
Sterling,  
Reliance,

Made only in  $\frac{1}{2}$  and  
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## Fortune Seamless Rubber Belt.

Absolutely the finest and most durable  
Rubber Belt yet produced.

Every belt tested before leaving factory.



We have the most modern and extensive belt machinery in the world and guarantee satisfaction in every instance.

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23219 S. Water St., Chicago, Ill.

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## THE LATEST RUBBER MERGER.

THE merger of the two largest rubber manufacturing companies in the world naturally is the most important item of news in the trade for the month. Many questions have been asked, and doubtless many more will be asked, regarding the probable effect upon the trade as a whole of this latest combination, but only Time can give answers to them all. It is the province of the journalist to record the happenings of the day, while the developments of the future must be left to later chroniclers.

It seems proper, however, to indulge in a few reflections at this time. When the United States Rubber Co. was formed it was the largest industrial consolidation the world had ever seen—in the amount of capital stated in its articles of incorporation. The fact that it was so essentially a pioneer undertaking may serve in a measure to explain its failure to make good, in many respects, the promises contained in the original prospectus. But the company has shown in recent years capabilities of a new order, indicating that its management has been able to profit from experience, and that its plan of organization involves features of merit and solidity which insure its permanency, on the theory of "the survival of the fittest" in the trade. Certainly the work of the present head of the company suggests managerial ability of the very highest order. It would not be difficult to point out how, in less capable hands, the United States Rubber Co. would now be in the hands of receivers.

The absorbing of the Rubber Goods Manufacturing Co., a concern devoted to an entirely different line of production, may prove a master stroke for the company first named, which is devoted to a single branch—footwear. Regardless of questions of management, no doubt its success for two or three seasons past has been due to an important extent to favorable weather conditions. In the absence of heavy snowfalls for another year or two, its yearly balance sheets might make a much less favorable showing, and the effect of the latest merger, by broadening the scope of the company's production of goods, will be to make the company much less dependent than in the past upon the vagaries of the weather. In other words, there has been planned a new pooling of profits, from a wider range of output of rubber goods, by reason of which the effect of weather conditions has been minimized to the extreme. There is now no important branch of rubber production which is not embraced, to an extent, under the new arrangement, whereas hitherto a good financial showing for the United States Rubber Co. was dependent upon a heavy snowfall and a consequent good demand for rubber boots and shoes.

The position of the independent rubber goods manufacturer, in whatever branch, does not appear to have been altered by the new merger. A monopoly in rubber footwear has never been established in this country; it is doubtful if it is nearer to-day than at any time in the past. The same thing is true of all the various branches of manufacture covered by the great combination which it is planned to merge with the United States Rubber Co. The



two combinations have been able hitherto to earn dividends on their capital, but meanwhile many independent companies, large and small, have likewise been able to secure customers and to make profits. The fact that the two companies have seen fit to join hands does not necessarily alter the position of the outside companies, many of which possess some special advantage over a great corporation, heavily capitalized, and managed by a board of directors of necessity removed from direct contact with the consuming trade.

Naturally the newly constituted combination will seek to obtain prices for mechanical rubber goods in keeping with the cost of production, and such policy will prove beneficial to the outside competing companies, just as a like policy in the rubber shoe interest has benefited everybody in the trade. Any other policy on the part of the big company will prove detrimental to it, in preventing the earning of the promised dividends on its capital.

One point to be considered is that ultimately the whole business of obtaining supplies of crude rubber must be revolutionized. How far the United States Rubber Co. has profited from its purchases of rubber in the primary markets can only be surmised, but no doubt its experience in this direction has been a potent force in bringing about the merger with the leading combination in the mechanical goods trade. It is not reasonable to suppose, however, that any combination can long buy rubber at any great advantage over the outside consumer. In other words, if the United States Rubber Co. should in time bring about the elimination of several middlemen between the producer and the consumer of crude rubber, it would not be long before the same advantage would be open to any enterprising independent manufacturer.

By way of conclusion, it is to be noted that the exports of American rubber footwear have been largely increased since the United States Rubber Co. succeeded a dozen factories each acting on its own account. This is natural and logical. One European agency, for example, can be conducted more economically than a dozen. The same thing may prove true of mechanical rubber goods, after the merger. But the domestic sale of goods in all branches must always prove more important—in volume and profits—than the export trade. Besides, whatever tends to advertise American goods favorably abroad widens the market for them. Whenever the United States Rubber Co., for example, has opened a new market for rubber footwear, its competitors have found it easier to gain a footing, and the same is likely to prove true in case the big company should begin an active campaign in the exporting of other lines of rubber goods.

#### CEYLON RUBBER PLANTING COMPANIES.

THE ownership and control of plantations by joint stock companies is no longer an experiment in Ceylon; it is the established order of things in a colony which has become wealthy within a half century mainly through agricultural development. The production of tea is the largest single interest on the island, though not representing the

whole of agriculture there. Almost without exception the Ceylon teas are produced by corporations, some of them of long standing, and the details of whose business are regularly compiled and tabulated and made public as fully as those of American banks and railroad and insurance companies. The shares of these tea planting companies have recognized market values and all who are interested can learn the acreage of the various companies, the amount of tea produced, the gross and net earnings, and the details of dividends and surpluses.

These facts are mentioned here because they have a certain bearing upon the newer enterprise of rubber culture which has been developed so successfully in Ceylon and more recently in the Federated Malay States, where similar conditions are coming into existence. Since the prime movers in most of the rubber planting companies in these countries have acquired their capital through planting tea, in which business they are still interested, it is to be presumed that the rubber companies will be managed on the same conservative lines as the tea companies, and that if there should be failures to realize adequate profits the fault will not be in the management.

There are numerous reasons why the cultivation of crops which require years of preparation, and each of which requires some effort of a special character, should be managed better on a large scale than those which are planted by individual farmers under the system of diversified agriculture which obtains, for example, in the United States, and rubber perhaps is a crop which is adapted particularly to culture on a considerable scale, by a large company, under capable management extending through long periods of time. It certainly cannot be commended to small growers, attempting to live in the rubber growing regions, since these as a rule are not suited for the homes of the natives of temperate zones.

The success of the joint stock plantation companies in the Far East is referred to for the further reason that their existence, as the regular order of things, after so long a time, must indicate that the method has merit, and if it has on the other side of the globe, it probably will prove to have merit on this side, and for similar considerations. But it must be understood that the profitable planting of any crop in any region implies the actual investment of capital—whether of a company or of an individual—in a plantation, and not in extravagant administration expenses at points remote from the land to be planted.

NOT ALL THE "FRENZIED FINANCE" of our country, with its boasted progressiveness, would be a match for the bewildered finance of some capitals nearer the equator, where life is presumed to be less strenuous. Two years ago the state officials at Manáos (Brazil), after estimating a balance at the end of the fiscal year of a paltry few thousands, were surprised to find one of nearly 4 millions; the next year they prepared for a balance of fewer thousands, and it actually worked out at over 5½ millions. So they feel that something ought to be done. Governor Nery proposes that the state borrow a lot of money—the unfailing source of relief at South American capitals when the financial equilibrium is upset. Which reminds one that when Manáos last borrowed a lot of money it was to buy

from private parties the city railway and electric lighting plant, and most of the debt is still outstanding. Now it is proposed to lease the railway and lighting plant to other private parties and devote the revenue thus derived to paying off the new loan. It would be interesting to see how the street railway can be utilized to help out the next succeeding loans.

THE COUNTRY NEWSPAPER CORRESPONDENT everywhere in the West has been able of late to make an addition to his not always extensive list of topics for neighborhood gossip. One reads in countless local papers that "A number of our farmers have purchased new rubber tired vehicles," or that "Several of our young men purchased new rubber tire buggies at So-and-So's opening," or some other such news. Everybody apparently who buys any sort of vehicle other than a farm wagon wants rubber tires on it, and the thousands and thousands of sets turned out in a year, for the trade of the prosperous American farmer, doubtless has as much to do with the high price of crude rubber as the more showy automobile equipment.

ONE OF THE CEYLON TEA COMPANIES mentioned on another page reports, as its initial experiment in rubber culture, the planting of 7888 Pará rubber trees, on 39½ acres, now from four to seven years old. From the older trees—number not stated—they lately gathered 1676 pounds of rubber, which was sold at a profit of \$2068.26, gold, on an average of \$52.11 per acre. This was the first yield, of only a portion of the planting, which rightly, it seems, has encouraged the company to plant more rubber, especially as their experience has been duplicated by so many other planters.

THE SUCCESS OF THE MOTOR OMNIBUS, the extensive introduction of which in London has been recorded in these pages of late, is dependent, according to the *New York Times*, upon good street pavements, and that journal pertinently adds: "Our cities need these, whether we have motor omnibuses or not." Good streets are essential to the satisfactory use of rubber tires on vehicles of any kind, and the advantages of such tires are becoming so evident that the continual improvement of the streets, even in American cities, must be considered as assured.

THE COLORADO RUBBER "IS ALL RIGHT," says the able Gunnison *Champion*, of that state, and "the process of extraction cheap," but "the difficulty seems to be the cottony tufts at the roots of the plant. These get into the rubber." So much the better. Why not make cotton rubber lined hose complete from the same "rabbit weed"?

## INDIA-RUBBER GOODS IN COMMERCE.

### EXPORTS FROM THE UNITED STATES.

OFFICIAL statement of values for March, 1905, and the first nine months of five fiscal years, beginning July 1, from the treasury department at Washington:

MONTHS.	Belting, Packing, and Hose.	Boots and Shoes.	All other Rubber.	TOTAL.
March.....	\$ 79,242	\$ 44,609	\$ 290,531	\$ 414,382
July-February....	591,309	1,018,122	1,541,217	3,150,642
Total.....	\$670,551	\$1,062,731	\$1,831,748	\$3,565,030
Total, 1903-04....	667,567	946,439	1,796,522	3,410,528
Total, 1902-03....	596,799	948,505	1,623,362	3,168,666
Total, 1901-02....	457,003	914,455	1,252,572	2,624,030
Total, 1900-01....	301,862	641,855	1,273,876	2,307,503

## FREEMAN'S SYNTHETIC CAMPHOR.

NOT long ago a Walter K. Freeman, M.E., of whom more anon, appeared before the heads of the great drug house of Parke, Davis & Co. (Detroit, Michigan), with a sample of camphor "made synthetically." His statement was that after long experimenting he had succeeded where all others had failed. In fact, "He and God were the only intelligences in existence that could make camphor." The story is that he got \$30,000 and was to get more, but one of the heads of the firm, Trueman H. Newberry (lately appointed assistant United States secretary of the navy), wrote to a prominent press clipping bureau for information regarding Freeman. The reply came by telephone:

"Read an article in THE INDIA RUBBER WORLD for January, 1903, signed W. H. Stayton."

Mr. Freeman was in the office when the clerk repeated this, as he wrote it down, and went out hastily, nor has he been seen since. The reason for his flight was that the article referred to treated of Mr. Freeman's \$2,000,000 American Crude Rubber Co., and his fraudulent attempt to make money by the sale of a secret for the manufacture of synthetic rubber. This exposé by THE INDIA RUBBER WORLD put a stop to his scheme—not, however, before he had secured some thousands from the credulous. Mr. Freeman's next move will doubtless be the manufacture of Synthetic Money.

## OBITUARY.

COLONEL E. A. ROCKWOOD, who died at his home in Buffalo, New York, on May 14, was for a quarter century active in the rubber goods trade. He was born in 1839 at Enfield, Massachusetts, and early in life removed to New York. In 1870 he went to Buffalo and began business as a rubber goods dealer, shortly afterward taking a partner, under the style of Rockwood & Burr. They represented the Goodyear Rubber Co. (New York). In August, 1871, the Goodyear Rubber Co. established a branch house in Buffalo, with Mr. Rockwood as manager, which position he filled for 25 years. In 1894 he suffered a paralytic stroke, from the effects of which he never recovered fully, and in May, 1896, the Buffalo store was seriously damaged by fire. Mr. Rockwood's ill health and the fire combined led the company to close their Buffalo branch in the summer of 1896. Mr. Rockwood was long actively identified with the New York State National Guard, first as a member of the Seventh regiment, during his residence in New York city, and later as adjutant of the Seventy-fourth regiment, at Buffalo. He then received an appointment on the Fourth brigade staff with the rank of colonel. He was Thirty-second degree Mason, and the funeral on May 16 was under the direction of Hugh de Payens commandery. Mr. Rockwood is survived by his wife and four sons, who are engaged in business or professional work in as many cities.

THE Compañía Alemana Transatlantica de Electricidad (the German Transatlantic Electric Co.), of Buenos Aires, one of the strongest companies of its kind in the world, and controlling the electric lighting and the street railways of that city and its suburbs, has decided to utilize its great plant in an endeavor to supplant with electricity the 3000 cabs now employed in Buenos Aires. The United States minister to Argentina reports that Mauro Herlitzka, the manager of the electric company, is about to place an initial order for 100 electric cabs and that he is convinced the demand for their services will be such as to warrant an early increase in their number.



## MR. JOHN H. FLINT.

THE new president of the New England Rubber Club, Mr. John H. Flint, in addition to being a wealthy and able rubber manufacturer, is in everything a typical New Englander. As treasurer of the Tyer Rubber Co., most of his time is spent in the old college town of Andover, where the company's works are situated. To be sure, like other Massachusetts business



men, he is in love with the "North shore," where he has a fine summer cottage, and where he is able to indulge his passion for fishing. But for eight months of the year one is sure to find him in the town of his birth, where he takes an active interest in all that appertains to its welfare or to that of the company of which he is treasurer. He has been in turn town treasurer, chairman of

the board of selectmen, chairman of the public works board, and is to-day president of the Andover Savings Bank, one of the strongest institutions in the state of Massachusetts, as well as director in various banks and other financial institutions. Personally Mr. Flint is one of the most unassuming men in the world. Absolutely without pretense of any kind, sincere, straightforward, a firm friend, very much of a philosopher, with a goodly share of humor, he is very popular wherever he is known. For a New England club no better head could be chosen than this same sane, shrewd New England Yankee.

## COMPRESSED AIR FOR PILE DRIVING.

AN application of power not involving the use of pneumatic tools properly so called, but devices bearing a relation to them, is the modern automatic steam pile driver, in which the machinery is driven through strong rubber hose. In recent years these have come into wide use with the result of rendering more effective work and in less time, and at less cost, than by the old method of pile driving. Steam pile hammers of this type used for foundations, docks, and piers, and other classes of heavy work, have been made as heavy as 10,000 pounds, and 12 feet in length, and a normal stroke of 42 inches. The hammer most extensively used in railroad work weighs 6500 pounds, with a stroke of 3 feet. The smallest hammer of this general type has lately been provided especially for the purpose of driving fish stakes for pound nets alongshore. This hammer weighs but 1350 pounds, with a normal stroke of 24 inches. While contractors were driving piles for the Louisville and Nashville railroad at Pensacola, Florida, 50 minutes' time was required to drive with a drop hammer a pile 75 feet in length, there being utilized 120 blows from the top of 75 foot leaders. The next pile, the same length, and located but 3 feet from the one mentioned, was driven to the same depth by a steam hammer which delivered 130 blows in 30 seconds.

## MR. GEORGE E. HEYL-DIA.

RECENTLY a well known India-rubber expert from Europe has become a resident in the United States, his plan being to open a consulting laboratory and do the same sort of work in India-rubber and Gutta-percha that he prosecuted so successfully in Great Britain. This gentleman is Mr. George E. Heyl-Dia, and as a beginning in his new field he has accepted



a position as consulting engineer for one of the most important insulated wire and cable companies in America; he is also doing some special work for rubber companies in other lines.

G. E. Heyl-Dia is a graduate of the University of Berlin, where he was a member of the philosophical faculty for three years. He then devoted much time and attention

to the manufacture of cable insulations, and was the inventor of an insulation called "Heylite," largely used in Germany by cable manufacturers. Following a call to England in 1889 he introduced into that country the well known "Diatrine" insulations, for electric cables, and later on accepted the position of managing engineer and chief chemist at Messrs. W. T. Glover & Co.'s works at Salford, Manchester, reconstructing their hydraulic lead covering department, and superintending the making of rubber compounds generally. Messrs. Glover acquired many of Mr. Heyl-Dia's patents, which they are working still.

Mr. Heyl-Dia then founded the St. Helens Cable Co. firm of Warrington and St. Helens, with a capital of \$2,000,000 and employing about 1000 men, and acted as chief engineer and as managing director jointly with Mr. Glover, who was however practically active at the company's steel rope and copper works at St. Helens. Mr. Heyl-Dia constructed the whole of this company's rubber and cable plant, introducing "Dialite," which is used in the mechanical rubber department, forming an important part of the company's business. After four years of strenuous work and responsibility Mr. Heyl-Dia handed the management over to a newly appointed board, devoting himself principally to the scientific-practical branch of consulting engineering in connection with India-rubber, reclaimed rubbers, and cables.

Mr. Heyl-Dia was also the originator of the "Dialine" Co., of Leyland, England, one of the most successful rubber reclaiming works in England, which is now presided over by Mr. J. E. Baxter, of the Leyland and Birmingham Rubber Co. It is from the "Dia" inventions that Mr. Heyl has adopted the name of Dia, which has become very familiar to the rubber trade. It may be added that he has introduced with success valuable processes in the manufacture of rubber, utilizing some hitherto useless waste products, and has also demonstrated commercially a process for the improvement of the quality of reclaimed rubbers.

## JOTTINGS BY AN AMERICAN IN EUROPE—II.

TO THE EDITOR OF THE INDIA RUBBER WORLD: A letter from me on a Swedish rubber factory may be out of place after the very able article\* published by you not long since on the Swedish rubber industry, emanating from the pen of your English correspondent. I am charged to convey to you the congratulations of the people here on your very able and correct article; it is something of a surprise here how so much that is so true was obtained.

This letter, like most of my writings, will be a rambling sort of an affair, for I shall probably mix up information received and impressions made upon me. For the first time in my life have I played the part of an interviewer and, pencil in hand, have asked any one to answer certain questions for publication. If the results warrant I may yet become a scribe. It has been my privilege to go through most of the rubber shoe factories of the world, and you know, Mr. Editor, that apart from details, one factory is very much like another. One finds a little different arrangement of machinery, perhaps, now and then, or a machine in use in one place not to be found in another, but on the whole one must be very familiar with the art to note these differences.

But some days spent about the works at Malmö have been the source of surprise. Here is a factory but a few years old, making shoes which are finding a market in France, Belgium, Germany, and far away China, and making them from self acquired knowledge, the only person who knew anything about the art being an Austrian shoemaker who had worked in Austria and Germany, but who knew nothing more than the putting together of the various parts used in the make up of the shoe. This is shown by many devices never before seen in any other factory by your correspondent.

I am now writing about one of those small factories with big names—Aktiebolaget Svensk-Engelska Gummifabriken—located in Malmö, Sweden. Of the five rubber factories in the land four make rubber shoes, but the one under consideration is the only one of these four in which the fact is recognized that a manager has all he should care for, if he makes shoes alone. This company has the word "English" (*Engelska*) as part of its name, but that is simply as a recognition of the fact that an Englishman was to furnish the brains to start and develop a general rubber business.

The company was founded in December, 1899, with a capital of 400,000 *kronen*, or roughly, \$109,000. The business man referred to was the present manager, Mr. Aug. F. R. Warnholtz, a young man without any knowledge of the business, and the technical director, a Mr. William MacDonald McIntosh. A year and a half was taken to put up the buildings, install the machinery (most, if not all of which, was a second hand lot of English make), and to make a collection of samples. This being done the problem of shoe making, which was after all to be the main feature, was attacked. Whatever the results were, the month of May, 1901, saw this infant industry in the hands of a young man, inexperienced as a rubber nurse at any rate.

The *Engelska* had disappeared from the field, if not from the name. Perseverance and will resulted in such wonderful success that in 1903 their shoes took a gold medal at Helsingborg, and silver ones at Hamburg and at Walwick, Holland, the highest in each case in the class. The quality of their product is good, and the cost of manufacture such that they have en-

tered the large European market with success. This is not strange, for in their works are devices unknown in others, and ways of doing things strange to me at least. And then the wages paid are so ridiculously small. The women average 55 cents a day, and the men from 84 to 98 cents. They work 10 hours a day—from 6.30 in the morning till 6 at night, with 1½ hours nooning. As the machinery does not stop until 1, and then for only 10 minutes for general oiling, many work on through the noon hour. The production has been 5000 pairs per day, about one quarter more than any shoe factory in the land, but is now being forced up to 6000 pairs.

It was with much fear that I came here with a machine. It is true that it was in use in every land in the world where shoes are made, but the famed Helsingborg works had been unable to master it, even with an expert operator from the United States. When the operator came away the machine stopped, and after a four years' residence in Sweden came back to its home. But in these works, young and lusty, the machine is running, and so will any other machine or appliance whether native or foreign that will facilitate labor, reduce cost, or give better work. You see, Mr. Editor, that I am an enthusiast. I try to see all the good there is in a man and then bring it into focus.

Here is a factory that has never used any lasts but those made of aluminum; they are cast right in the works, and are a great success here; of course, lasts used in Europe are all of cast iron, and the comparison is an easy one to make, for the weights cannot be compared. The model is made of wood, then the patterns and core boxes are made of aluminum; and hundreds of lasts are made, one just like the other. No trouble is found in their use; they are made thick enough to stand the hammering and knocking about they get.

A four roll calender just built from their own designs shows some novelties; each and every roll is adjustable from one hand wheel at the side of the machine. A device on the feed side automatically takes care of the net; it gives every foot of it the proper tension, and prevents the curling of the edges of the fabric where cut. One of the fabrics used is being patented in Europe and is not only labor saving but saves much in cost of the raw material; they use automatic presses for dieing out their stock. This works rapidly and well and no man has ever had a finger pinched or hand jammed on one of them, and they were designed here.

The mechanical engineer is a young man trained as a gun maker in Austria. He was in the employ of our government at the gun shops in Washington and at the proving grounds at Sandy Hook, (New York), some ten years ago. Soon after that he became identified with the rubber business, and is now devoting his time to shoes.

I want to use this space for a moment longer for personal purposes, and then I am through. In one of its recent numbers this valuable Journal saw fit, in the absence of anything of importance I presume, to print a rather flattering notice of the writer. After a few days' loitering about the plant I was one day politely asked by Mr. Ridderborg, the treasurer of the concern, to translate a lot of Russian correspondence he had. As good fortune would have it, I had with me my Russian *vade mecum*, and I worked out the problem. It was no easy task, as letter by letter I had to work out the puzzle. But I succeeded, and gave the results to my new found friend. He

\* THE INDIA RUBBER WORLD, November 1, 1904—page 41.



smiled and thanked me, saying: "I do not need this, but I wanted to test the truth of THE INDIA RUBBER WORLD, which said that you were a master of Russian." The young man may sometimes visit the home of "the only great rubber paper," and then I will turn *him* over to the tender mercies of my friend, the Editor.

A. M. STICKNEY.

Stockholm, Sweden. April 1, 1905.

### LOWELL'S EXCITED GOLF PLAYERS.

AT the recent annual meeting of the Vesper Country Club (Lowell, Massachusetts, March 30) a resolution was adopted requesting the golf committee to consider the expediency of handicapping, by not less than half a hole, any ball retailing at more than 50 cents each, and suggesting the advisability of conditioning all strictly club events upon the use of solid Gutta-percha balls. The resolution was offered by Mr. Joseph Smith, who spoke feelingly in support of the measure, as follows:

"MR. PRESIDENT: Before submitting my resolution for this Club's action this evening, I would like to say a few words concerning a condition which confronts us, and which, unless it is strongly and unitedly met, spells disaster for the game of golf and for clubs whose life and activities are based on golf.

"We have all discussed the trusts more or less; we have all been fleeced by them more or less; and, more or less, we have all submitted to being plundered by them in a sort of helpless, shamefaced way. We kick; but, forgetting the noblest kicker in nature, the mule, we kick with our wrong end—our tongue, not our foot.

"The beef trust robs our pantry, the coal trust our kitchen, the oil trust our parlors, the woolen trust plunders our backs, the whiskey trust our palates; while the leather trust steps on our corns and the collar and cuff trust gives it to us in the neck.

"From the cradle to the grave, the furniture and coffin trusts graft us; whether we travel in baby carriages, hacks, autos, or railroad coaches, somebody is levying tolls on us; and, judging from Rockefeller's activity in church affairs, he is trying to corner heaven, since the other place is too hazardous for his main business.

"Quick or dead, saint or sinner, we are all robbed in the sacred name of business, and now springs up a combination which proposes to rob our recreation, to plunder our pleasures—the golf ball trust, the most cold blooded, deliberate, and impudent extortioner that has yet appeared in the role of a business highwayman.

"Last year we paid \$6 a dozen for balls. This year the gentlemanly rubber robbers will charge \$7.20, \$7.50, and \$9 a dozen, but they will shrewdly keep some balls at \$6 this year to quiet our fears, and next year we will be blandly told the \$6 ball has been abandoned as unprofitable and only the robber rubber ball will be left for us.

"Next year it will be a choice of high balls or croquet. The modest golf ball trust regards 40 per cent. as a dead loss, 60 per cent. as a bare living, 80 per cent. as a meager profit and 95 per cent. as about a fair thing. Beside the golf ball trust, the daughter of the horse leech is a modest young thing.

"What does this condition mean for the game of golf and for this Club? Without golf this Country Club will decline, and the quickest way to kill golf is to make the game too expensive for the player of modest means; that is for every player in the Vesper Country Club.

"New players are necessary for the continuance of the club, and the new players as a rule must come from the young men whose means make the exorbitant prices I have cited prohibi-

tive. Without new blood in golf, golf dies and the death of golf will mean the death of this Club.

"As a general proposition as the exactions of a trust are everybody's business, and everybody's business is nobody's business, we all submit meekly to plunder. This golf ball trust, however, is a personal affair for every one of us; it not only picks the pocket of every individual, but it hits the Vesper Country Club and every other club like it a foul blow. It is for us to hit back, and hit hard, and now. We wouldn't be worth our salt if we submitted without a fight.

"Individually we should refuse to buy or use the golf balls and golf goods of any member of the trust; collectively as a club, we can make the use on our links of anything bearing their brand both unpopular and embarrassing; and, as a further move, we can appeal to every club in Massachusetts, New England, America, to stand with us for fair play, honest dealing and clean sport, and to help us to defeat and discredit the latest, meanest and most contemptible of trusts, that of golf balls."

Referring to Mr. Smith's highly impassioned speech, *Harper's Weekly* (April 15) says, in an editorial: "This is a sad story, and implies defect of faith in mankind when incorporated—a defect that is almost prevalent enough nowadays to be called epidemic. The high priced balls have rubber in them, and the money invested in them goes farther when skilfully smitten than that represented by the cheaper old style balls. But the possibility that the balls may become too good for the good of the game is worth considering, and the Lowell club has done worthily to bring it to attention."

The Lowell *Mail* goes further, and declares that the effect of Mr. Smith's effort has been to "bust" the golf ball trust. Verification of this assertion, however, has not been had from any other source.

### SOME WANTS OF THE TRADE.

[330] FROM a New England jobbing house: "We desire to know if you can inform us who manufactures the basin stopper with flange, as we are having quite a number of calls for these, and would like to stock them."

[331] From a Boston jobbing house: "We desire to know if you will be kind enough to inform us of the name of the best manufacturer of garden hose reels. We use quite a quantity of these in a season and would like to make connections with the right concern on these goods."

[332] From a New York commission house: "Can you furnish us with a list of names of makers of hard rubber, especially those who make hard rubber for electrical purposes, as accumulator boxes, etc.?"

[333] From a factory in Massachusetts: "Kindly advise us of the names of suppliers of Lithophone, and oblige."

### ANSWERS.

[317] The Manufactured Rubber Co. (Philadelphia) and the Raven Mining Co. (Chicago) mention being in a position to supply material suited for coating cotton goods to be used as wagon covers and the like.

[324] Joseph Bondy's Sons (No. 407 Broadway, New York) report that they make a specialty of machinery for extracting rubber from Guayule; also of selling rubber of this grade.

[327] The Faultless Rubber Co. (Akron, Ohio) is interested in having the names of concerns desiring massage novelties.

[328] Boston Woven Hose and Rubber Co. (Boston) reply to the inquiry for conveyor belts—two ply center, four ply ends.

[329] Excelsior Machine Works (Akron, Ohio) manufacture machines for binding hose with wire.

## THE INDIA-RUBBER TRADE IN GREAT BRITAIN.

*By Our Regular Correspondent.*

**T**O judge by reports from large factories it is clear that the continued high price of rubber is having but little effect on the demand for goods. "We are full up with orders," said the manager of one of our biggest factories to me the other day, "and not in any one department only, but in practically all departments." Of course the general revival in trade and the exceptionally busy times in the cotton trade are responsible for this, and as in the bulk of cases rubber goods are necessities rather than luxuries, they continue to be bought even though the buyer may grumble at the prices. Two consequences of the present high prices are to be seen in the renewed energy of the artificial rubber patentee and in the invitation to the public to subscribe to rubber planting undertakings. Several instances might be recorded of activity in the artificial rubber department, the schemes and ideas in connection thereof being usually put before accountants, engineers, and people generally who have no intimate knowledge of the subject. I heard recently of a rather audacious swindle by which a too confiding capitalist lost considerable money. It was a secret chemical process for the production of "Pará rubber," in which, so the inventor stated, it was necessary to use some costly platinum vessels. The inventor, pleading poverty, induced the investor to give him a secluded spot for carrying on experiments, and also to give an order for the purchase of the platinum. When the operations had been in progress for some days the patentee vanished, and has not since been seen. The capitalist consoled himself with the idea that he could get some of his money back by selling the platinum vessels, but alas for his hopes, these had vanished also. From notices issuing from a sort of financial house in Paris it would seem that the artificial rubber problem has at last been solved in Germany and that an opportunity now occurs for investors to get in cheaply. Two or three other cases have come to my knowledge where self-deluded people, to use polite terms, are utilizing the present price of rubber to obtain public support for their special venture. With regard to the trade generally even those who are most busy would eagerly welcome a reduction in the price as the present profits are not commensurate with what is expected from brisk times.

THE annual meeting will be held this year in London in July. The proceedings will be more extended than usual owing to the visit of Mr. W. H. Nichols, the president, and 50 or 60 other American members. Last year the society met in New

York and those who went from this side were entertained on a lavish scale. It is unlikely that our visitors will get an equal return, but still great efforts are being made to make the visit interesting and instructive; it is proposed that they shall spend a week in London and then visit the seats of the Northern and Scotch sections. Despite the large influx of Americans of late years into the society, I understood that the rubber trade in the States is very sparsely represented by its prominent members, and this being so we are, I suppose, unlikely to have the trade in evidence at the July meeting. Mr. Harold Van der Linde, late chairman of the Canadian section and a prominent official of the Gutta Percha and Rubber Manufacturing Co. of Toronto, Limited, has only recently been in England on a visit and is hardly likely to cross again so soon.

I UNDERSTAND that at the meeting held in Manchester on May 5 no decision was arrived at with regard to a further general advance in mechanical goods. Difficulties which on similar occasions in the past have been overcome remained on this occasion triumphant and the only definite arrangement come to was to fix the price of A rubber—that is, the compound of fine Pará and sulphur. Some arrangement also was come to regarding cycle tires, but the idea of a general uniform advance did not come to fruition. This of course is chiefly due to the fact that each manufacturer has his own special methods and bill of costs, a result of which is that one may be able to sell at a profit while another can only just pay his way at the same figure.

THESE works, which are situated at Deptford, were recently offered at auction, financial difficulties having been encountered during last year. The principal creditors were Messrs. Heilbut, Symons & Co., the well known rubber merchants, and they are practically in possession of the premises. They wish to dispose of the business and premises as a going concern and so far have not acceded to the desires of those who have been disposed to purchase certain portions of the plant.

AN accession to the ranks of substances which lay claim to be substitutes for leather at a reduced cost is to be seen in a product invented by Mr. Davis, manager for Messrs. Foster & Williams rubber manufacturers of London. The process which is worked as a secret one and has not been patented is now vested in a recently formed company called Leathern, Limited. So far only trial lots have been made and the stuff is not yet on the market. Unlike several other leather substitutes it is not an oxidized or nitrated oil but in addition to waste leather powder it contains India-rubber and mineral matters and is put through the vulcanizing process. Negotiations are at present in hand with the object of acquiring a factory.

IT is announced that the London fire brigade is to be provided with rubber gloves, now it is recognized that so many outbreaks of fire are associated with electric light or power. It seems to me that this decision has been arrived at none too soon, especially in view of remarks made from the judicial bench in compensation cases. It is many years since I used these articles and then they were of a rather clumsy nature and very hot to wear. I believe that in recent years two or three patents have been taken out with special reference to the requirements of electricians and in view of the above decision a considerable increase in their sale should ensue.

I HAVE come across varieties of rubber solution imported from America. The first one is a compound body described as a quick-cure vulcanizing solution and is sold by The B. F. Goodrich Co. as part and parcel of motor tire repair outfits. Motor car people are popularly supposed to be well off and it is just possible that the price charged for this solution leaves more than the average trade profit in rubber goods. The other was the ordinary rubber dissolved in naphtha and was sent out as a sale sample by the Liverpool Dock authorities who had confiscated the parcel, it having been consigned without the req-

INDIA RUBBER  
MANUFACTURERS'  
ASSOCIATION.LONDON RUBBER  
MANUFACTURING CO.ARTIFICIAL  
LEATHER.INDIA-RUBBER  
GLOVES.AMERICAN  
RUBBER  
SOLUTION.RUBBER  
PRICES;  
PROPOSED  
SUBSTITUTES.SOCIETY OF  
CHEMICAL INDUSTRY.



uisite declaration of the contents. It was a risky venture and it failed. Considering the high freight charged for this class of merchandise I don't suppose it would pay unless it could be sort of smuggled across, a proceeding not to be recommended, though in saying so much I quite agree that a good deal of the alarm with which carrying companies regard rubber solution is quite unjustified. I don't know the end of the solution in question; the alternative to selling it, the authorities said, was to have it burnt.

ON previous occasions I have complained of the careless way in which authors who may be eminent enough in their special subject essay to touch upon the rubber manufacture. In this connection I have a lance to break with Professor Sexton whose book on the chemistry of materials of engineering has recently been published. Of course one does not expect a professor of metallurgy to know the details of the rubber trade, but then it is easy enough to get a little assistance when writing on foreign subjects, or at any rate to submit the proof to some one who is qualified to comment upon it. To tell the student that vulcanized rubber is rubber incorporated with sulphur up to 20 or 30 per cent. is not only inaccurate, but quite insufficient in that reference to heat is omitted. Let us hope that if a further edition of this undoubtedly useful volume is called for the references to rubber will be rewritten. In contrast to what I have just said I note with satisfaction the references to rubber and more particularly to Dermatine in the new book on valves and valve-gearing, by Charles Hurst, a leading authority in this branch of engineering. Mr. Hurst, it is clear, has taken every pains to have the special technical references in his book verified by experts.

I AM writing this month in a long spell of sunshine and the subject of garden hose suggests itself as an appropriate topic.

Compared with what obtains in the provinces, we have to note that the leather hose is still very largely preferred to rubber in the London parks. It is more expensive but wears well, and consequently has a long life. Those who are inquisitive in such matters will no doubt have noticed that at Kew gardens and at some of the Royal residences the hose in use bears the inscription of the Dermatine Co., and it would seem that this material is being used to an increasing extent as a garden hose of superior quality. No doubt the small user who looks closely at the price per foot will go on buying the highly mineralized rubber article, because the Dermatine hose is not cheap.

ON enquiry at the Dunlop Rubber Works (Aston Cross, Birmingham) recently I was pleased to hear that the fire reported in my last notes was not quite so serious a matter as had been supposed. Certainly a good deal of damage was done and considerable inconvenience caused, but it was the department for cycle tires that was affected, the motor tire department with its valuable stocks being untouched. Owing to the custom of the company carrying considerable stocks of cycle tires at their Coventry and other depots, they were able to draw upon these in the emergency that arose, and practically no dislocation of the business resulted. The cause of the fire has been kept a secret, though it appears to me that in these cases such information should be made public as might benefit the trade in general, as a means of prevention of similar fires elsewhere.

WHAT'S THE MATTER WITH WORCESTER?—The rubber industry is reported to be booming, particularly in Brazil, according to government reports. The government is too far sighted. It should take a look at Worcester, for instance.—*Worcester Gazette*.

## LITERATURE OF INDIA-RUBBER.

CULTIVO DEL ARBOL DEL CAUCHO. POR MIGUEL A. LOYO, Ingeniero Agrónomo. Mexico, 1904. [8vo. Pp. 77.]

THIS brochure, issued by the *secretaría de fomento* of Mexico, is a *résumé*, by an evidently practised hand, of the history of the discovery of India-rubber and of its applications, with a reference to the various species yielding commercial rubber, together with the conditions to be considered in the cultivation of the rubber tree, and particularly in the zone of which Mexico is a part. The facts in the first part of the work seem to be stated with fair accuracy, but the portion relating to rubber culture is altogether too general in terms to make the work of practical value as a guide to intending planters, in Mexico or elsewhere.

DIE KAUTSCHUKPFLANZEN. EINE WIRTSCHAFTSGEOGRAPHISCHE Studie. Von Peter Reintgen. (Beilage zum *Tropenpflanzer* Nr. 12, Band VI, Mai, 1905.) Berlin: Kolonial-Wirtschaftliches Komitee. 1905. [3vo. Pp. iv + 220. 2 maps.]

THIS is the result of an exhaustive attempt to analyze the rubber production of the world, with a view to determining the share in it of each of the important rubber yielding plants. The author has chosen the year 1900 as the latest date for which anything like comprehensive figures are available for some of the minor rubber producing districts. Summarized, his figures show about 31,466 tons for America, 16,000 tons for Africa, and 2339 tons for Asia and the Pacific islands—totaling 49,805 tons, or roughly 50,000 tons. Of this total he attributes 25,498 tons to the *Hevea* species, and 4355 tons (including the so-called South American Cauchio) to the various *Castilloas*. Manifestly the distribution of the African product—in itself not possible to be stated exactly—between the various botanical species yielding it is not yet possible. A work of value has been done, however, in compiling the latest testimony regarding the actual sources of commercial rubber in Africa. The present list of rubber producing *Landolphias*, for instance, is perhaps the most complete and correct yet presented. It is to be noticed, by the way, that the *Landolphia florida*, once supposed to be an important source of rubber, is not included. One practical value of such a work will be in enabling rubber planters to avoid the culture of species without economic value, though only experimenting will determine the desirability of the culture of certain plants which in their native state are valuable as a source of rubber. The author throughout his work is careful to give credit to his authorities, and THE INDIA RUBBER WORLD may be pardoned for mentioning the liberal extent to which its statistical summaries, for a number of years past, have been quoted.

THE EVOLUTION OF RUBBER CORED GOLF BALLS. BY C. T. KINGSZETT, F. I. C., F. C. S. London: 1904. [16mo. Pp. 47. Price, 6 pence.]

THIS is a revised reprint of a series of articles contributed to the London *Golfing*, in which is reviewed briefly a large number of patents relating to golf ball construction, including those granted to the author. It is a convenient but not a comprehensive or altogether accurate guide to whoever may be interested in the study of this subject.

### OTHER BOOKS RECEIVED.

THE International Cable Directory of the World for 1905 issued in conjunction with the Western Union telegraphic code system, has just come from the press. It is a book of over 650 pages, and furnishes the only complete list of cable addresses published. It contains the names of over 25,000 companies, firms, and individuals classified under proper business headings, which latter are printed in English, German, French, and Spanish. It is an excellent book of reference. [International Cable Directory Co., New York and London.]

## RUBBER PLANTING AND EXPLOITATION.

## THE NORTH AMERICA RUBBER CULTURE CO.

[Plantation near Santa Lucia, Canton of Tacahua, state of Oaxaca, Mexico. Office: New York Tribune building, Kansas City, Missouri. See THE INDIA RUBBER WORLD, August 1, 1904—page 341.]

THE annual report of Bixby Willis, general manager, states that early in 1903 the company planted 188 acres from nursery stock, with complete success. The 90 acres planted later in 1903 did not do well, and were replanted in 1904. This, with the 150 acres additional planted in 1904, is doing nicely, and it is intended to plant 90 acres this year, which will make a total of 510 acres. Thousands of the trees planted in 1903 are said to be 5 inches in diameter and 14 feet high. All the planting is done from nurseries, amid debris left after felling the forest, and without burning over the ground. The work of development is done under contract by the Mexican Tropical Planters' Co., and the North America company is put to no expense other than the payments made under the development contract. The cash capitalization of the company is \$158,400, or \$158.40 per acre for an actual area of 1070 acres owned. The general manager of the Mexican Tropical Planters' Co., from whom this company purchased this land, is Mr. Louis Kunz, who is now one of the oldest rubber planters in Mexico in point of experience. Mr. Willis says that the Tropical company has a paid up capital of \$500,000, and that its "Colombia" plantation is one of the best developed in Mexico.

## BATAVIA COMPANY, INC.

[Plantation "Batavia," Jalapa de Diaz, district of Tuxtlapec, state of Oaxaca, Mexico. Office: Wells building, Milwaukee, Wisconsin. See THE INDIA RUBBER WORLD, June 1, 1904—page 305.]

THE second annual inspection of Batavia plantation, under its present management, was made by F. J. Finucane, of Antigo, Wisconsin, as representative of the shareholders of the company, after spending two weeks on the property in February. The 70 acres of rubber planted in 1899 to 1901 he reports in good condition, together with the 40 acres planted in 1904. The planting planned for this year is 110 acres. About 15,000 coffee trees 5 years old are in bearing. In 1904 over 40,000 coffee trees were set out, and extensive nurseries have been prepared for further planting. The company are about to install a coffee mill. The original 60 acre planting of sugar cane has become productive. The report throughout consists of details in shape for verification, and indicates that a great deal of work has been done on the property in the shape of permanent improvement, in addition to planting crops. The net profit of the sales of coffee, cane, and corn are deposited with a trust company as a dividend fund, out of which it is stated that a 7 per cent. dividend was paid to the shareholders in 1904.

## THE OBISPO RUBBER PLANTATION CO.

[Hacienda de San Silverio el Obispo, state of Oaxaca, Mexico. Office, No. 15 William street, New York.]

MR. JAMES S. BEACOM, a leading attorney in Pennsylvania, and a former state treasurer, lately paid a visit to Mexico, to inspect the plantation of the Pittsburg-Obispo Plantation Co., of which he is treasurer. This is a new enterprise, adjoining the Obispo Plantation Co., which has been mentioned frequently in these pages. In a report to the shareholders of the newer company, Mr. Beacom writes as follows in regard to the work done by the company first formed: The "Obispo" plantation consists of 9000 acres, of which about one-third is cleared, and for the most part planted in rubber. Work was started early in 1901 and the oldest rubber is now about 3½

years old. The work is being done under contract by the Republic Development Co., a New York corporation, and is in charge of Mr. Maxwell Riddle, formerly of Ravenna, Ohio, who is treasurer and manager. Mr. Riddle states that it is intended to extend the planting until the whole tract is under rubber. The rubber is planted 9 × 9 feet. The original planting was from nurseries, but planting the seed direct has proved more satisfactory, and this method has been adopted exclusively. Two crops of corn are grown annually, the product finding a ready market locally, and Mr. Riddle is experimenting with additional crops and planning to introduce grazing. — Mr. Beacom and a companion tapped a wild tree in the neighborhood which was supposed to be 15 years old and bore the marks of former tappings, and obtained about 3 pounds of dry rubber. They saw a seven year old cultivated tree tapped, with a yield of ¾ pound.

## JOLIET TROPICAL PLANTATION CO.

[Plantation "Joliet," Tierra Blanca, state of Vera Cruz, Mexico. Office: Joliet, Illinois. See THE INDIA RUBBER WORLD, February 1, 1904—page 100.]

THE second annual inspection report, by Mr. F. M. Muhlig, the stockholders' inspector, dated January 20, 1905, has appeared in a pamphlet. The acreage planted to rubber at that date was stated at 230, from 6 to 18 months old, and the plantation manager, James C. Dennis, was planning to plant 150 to 200 acres this year. The rubber nursery has been discarded, and seed will be planted hereafter. The number of cattle has been increased, and Mr. Muhlig recommends grazing on an even larger scale, while awaiting the development of rubber. The company have considerable land regarded as suitable for sugar, but Mr. Muhlig does not regard sugar growing as profitable except in a large way. The company have derived a profit from growing corn among the young rubber, since the cultivation of this crop serves also to keep the rubber clean.

## WORK ON PLANTATION "RUBIO."

THE report on the Tehuantepec Rubber Culture Co.'s plantation "Rubio," referred to in this Journal last month [page 276], contains the following in relation to the labor question there:

METHOD OF WEEDING — Mention should be made of the change made during the past year in the method of weeding the trees, as it plays such an important part in the expenses of the plantation. Until the past year the ground between the trees has had all weeds cut down completely by native help, not disturbing the soil, but practically shaving off the surface with the *machete*, taking down all growth of weeds and grass. During the past year the plan has been tried of clearing only a strip 1½ feet in width on each side of the row of trees, and throwing the weeds and grass cut down into a windrow on top of a strip of 3 feet in width. This growth is so dense that it kills off the weeds on the middle strip so that they die without being cut, and is apparently working satisfactorily. A man under the old method could weed out about 150 trees in a day, while by the present method he can do from 450 to 500 trees, thus cutting down the expense of weeding very materially. This method of weeding has seemed to work all right, and certainly no trees are suffering from this plan. In some of the lower places the grass grows up to some extent through the dead stuff placed on top of it, but as a rule the plan may be considered to be a success. By this method of weeding, the force of laborers can be cut down to about one half its former proportions.

The inspector also says: "The experiment of employing Japanese labor, which was tried last year, by the employment of some 27 Japanese, was not satisfactory. The inability of the Japanese to do the weeding



in accordance with native methods, and to push their work along, seemed to make it impossible for them to do an equal amount of work with the natives, and their employment was discontinued in January of this year [1905]."

Several pages in the report quoted give the results of measurements of trees in the various camps and planted in different years. Extra large trees planted in 1902 were found to measure 18 feet 7 inches in height with a girth of 21 inches or more at base and 16 $\frac{1}{4}$  inches 5 feet from base. The following table of average measurements of the 1902 planting is given:

Camp	Acres	Height	Girth, base	Girth, 5 ft
Tio Victor.....	390	12 $\frac{1}{2}$	13 $\frac{1}{4}$	8 $\frac{3}{4}$
Ojo de Agua.....	503	10 $\frac{7}{8}$	12 $\frac{5}{8}$	8
Loma Grande.....	412	10 $\frac{1}{2}$	11 $\frac{1}{4}$	6 $\frac{7}{8}$
Segundo Semillero. . .	194	8 $\frac{3}{8}$	9 $\frac{7}{8}$	5 $\frac{1}{2}$
Total.....	1499	10 $\frac{3}{4}$	12 $\frac{1}{2}$	7 $\frac{1}{2}$

The average measurement given for the planting of 1903 and 1904 were equally satisfactory.

#### SAN MARCOS RUBBER PLANTATION CO.

Plantation near Monesterio, department of Palenque, state of Chiapas, Mexico. Offices: No. 81, Adams and Black, Chicago, Illinois. See THE INDIA RUBBER WORLD, October 1, 1904, page 17.

A REPORT to the directors made by James R. Hardy, secretary and general manager, as the result of a recent visit to the plantation, in company with several shareholders, has been printed in pamphlet form. The number of rubber trees under cultivation, of various ages up to two years, is stated at 500,000, and photographic views indicate them to be in good condition. Additional planting has been planned for this year. Robert G. Hardy has become plantation manager.

#### THE GRAND CENTRAL CEYLON RUBBER CO., LIMITED.

THIS company has been formed at Colombo, with an authorized capital of 5,000,000 rupees [= \$1,622,166.67, gold], to acquire about 16,400 acres in the Kegalle district for the purpose of planting rubber and other suitable products. The initial issue of shares amounts to 3,000,000 rupees, of which the vendors of the land accept 1,350,000 rupees, besides subscribing for 650,000 rupees in shares, and the remaining 1,000,000 was offered to the public at the beginning of April. It is understood that the shares were promptly subscribed for. The properties taken over include the Urumewella estate of 1400 acres, of which, according to the contract, 1000 acres will be planted to rubber by June 1, 1905, the date of the transfer, the date of the plantings being as follows:

	1902.	1903.	1904.	1905.	Total.
Acres.....	112	249	308	331	1000

The remaining lands are all uncultivated as yet, but the company's prospectus outlines a program for planting as capital is called in, up to 1913, after which it is expected that the income from production will be ample for continued extension of the work until the whole area has been planted. It is expected that the 1902 planting will come into bearing in 1908. This appears to be the largest company that has ever been floated in Ceylon, and it is stated that its funds are to be devoted entirely to rubber cultivation. First directors: Hon. J. N. Campbell (chairman), J. P. Anderson, William Forsythe, Joseph Fraser, James Forbes, W. S. T. Saunders, W. Shakespeare. Agents and secretaries: Carson & Co., Colombo.

#### GENERAL CEYLON TEA ESTATES, LIMITED.

At the eighth annual shareholders' meeting (London, May 1) the chairman reported for 1904 the largest crop of tea yet produced by the company—2,549,237 pounds—but owing to the lower prices the returns were not proportionately larger than in former years. The company's directors in Ceylon had urged the interplanting of all their tea with rubber, but the

London management thought it best to go slow in this regard, for the reason that the best cannot be had from both plants on the same soil at the same time. They had planted some Pará rubber, however—reported at 83,750 trees, now 1 to 7 years old, on about 419 acres—and 276 acres more would be planted during this June, and the planting of 1000 acres had been planned for the next two seasons, when they would have 1700 acres in rubber exclusively. Last season they harvested 1627 pounds of rubber from some of their 7 year old trees and sold it at a profit of £425 [= \$2068.26], or at the rate of 5s. 3 $\frac{3}{4}$ d. per pound. This season they expect to gather 2200 pounds from the same trees.

#### RUBBER PLANTING PROJECTS IN BORNEO.

THE British North Borneo Plantations Co., Limited, registered in London, April 12, 1905, with £52,500 capital, to carry on the business of planting and dealing in tobacco, Pará rubber, and similar products. One of the board is W. C. Cowie, managing director of the British North Borneo Co., and two others are members of the board of the United Lankat Plantations Co., Limited. The new company will acquire from British North Borneo Co., Limited, about 27,650 acres of selected tobacco land, in the Darvel bay region, part of which has been cultivated, producing a high grade of tobacco. While its business proper will be the cultivation of tobacco, the new company intends to plant rubber to a considerable extent, believing that, on account of the available native labor and the fact that work on a rubber plantation is very light, rubber can be produced at a minimum cost, without interfering with the growing of tobacco. Registered offices: 2 Tokenhouse buildings, E. C., London.

=The Sapong Rubber and Tobacco Estates, Limited, registered in London, April 13, 1905, with £100,000 capital, to acquire from the British North Borneo Co. 20,000 acres of land near Sapong, now occupied by the Borneo Tobacco Estates, Limited, and to plant and deal in tobacco, rubber, cotton, and other products. The directors are members of the board of the New London Borneo Tobacco Co., Limited. A portion of the estate is already under tobacco, and it is intended during the first two years to plant 500 acres with Pará rubber and to continue afterwards at least at the same rate. The prospectus states that experiments made in the government gardens at Tenom during the past four years show the adaptability of this region to the successful growth of Pará rubber and it is figured that with the selling price of only 2s. 6d. [= 60 cents] per pound, rubber will yield a profit. Registered offices: 101 Leadenhall street, E. C. London.

#### YIELD OF CEARA RUBBER IN CEYLON.

FRANCIS J. HOLLOWAY, manager of Kepitigalla estate, Mat-tale, Ceylon, reports in *The Times of Ceylon* (March 31) the details of tapping 20 Ceará rubber trees (*Manihot Glaziovii*), growing at an elevation of about 2000 feet, and ranging in girth from 14 inches to 24 inches, 3 feet from the ground, but their age is not mentioned. The trees were tapped daily for six weeks in January and February, and yielded 22 pounds of dry rubber, which was sold in Colombo at 4.70 rupees [= \$1.52 $\frac{1}{2}$ , gold] per pound. This may be regarded as equivalent to about 7 shillings on the London market.—Mr. Holloway is understood to have devised an improved tapping tool, for which he has applied for a patent.

#### RUBBER PLANTATION COMPANY PUBLICATIONS.

THE Obispo Rubber Plantation Co., New York.—Fourth Annual Inspector's Report [By William H. Martin] and Financial Statement of the Rubber Development Co. 1905. 28 pages.

## AFFAIRS OF THE UBERO COMPANIES.

[THE last issue of this Journal contained the details of the business of the *Ubero Plantation Co. of Boston* and the *Consolidated Ubero Plantations Co.* which led to the appointment, in the federal courts, of receivers of the assets of those companies. The receivers have not yet made a report on the affairs entrusted to them. Mr. Stedman, who is quoted below, was for some time president of the companies.]

ON the return from Europe of Mr. Arthur W. Stedman of the firm of George A. Alden & Co., who arrived at his home in Boston on May 4, he was besieged by newspaper reporters for interviews in relation to the Ubero plantation companies, to all of whom he refused any statement for publication, pending the report of the receivers now in charge of the affairs of these companies. In the course of a conversation with the Editor of THE INDIA RUBBER WORLD, however, Mr. Stedman reviewed his connection with the Ubero companies, and in view of the interesting character of his statement he has been persuaded to break the seal of his silence and consent to the publication of the following interview:

"As all of the rubber manufacturers know," said Mr. Stedman, "I have been for years intensely interested in the opening up of new sources of rubber. Not only because I wanted my firm to become factors in the handling of all new sorts, but I felt that the trade more and more needed greater supplies. For this reason, when Congo rubbers first appeared on the market, in 500 and 1000 pound lots and little general attention was paid to them, I took a lively interest in them, had them tested, found customers who could use them to advantage, and our present imports will show what the result of that attention has been as far as we are concerned. Then too, I took hold of and got to going a large company for the gathering of Pará rubber, to be brought out and shipped from the west coast of South America. That company has produced many hundreds of tons of rubber, and is still producing.

"Again, I got a Boston syndicate to take up a large tract of wild land down in Panama, and although that occurred but a short time ago, many thousand pounds of Central American rubber of high grade have already come into the market and increased receipts will follow from this source. All that, of course, was in the line of increasing the supply of wild rubber; but it has seemed to me from the beginning of rubber planting that one great source of good rubber some day would be that produced by plantations.

"When Ceylon plantation rubber first appeared, I at once began to handle it, and we have not only imported more of it than anybody else in the United States, but at the present time have one of our men in the far East visiting the planters, taking photographs, and examining the whole situation, with an idea of gaging the future output and seeing that American manufacturers have their share. I cite all this, simply to make it clear how much interested I have been in anything that promised an addition to the supply of crude rubber.

"When rubber planting in Mexico began to take shape, scores of companies came to me and made all sorts of propositions with the view of obtaining my coöperation. I, however, turned them all down. Finally, an old time friend of mine introduced Mr. W. D. Owen. This friend was a planter in Mexico whose property bordered on the Ubero property, a man who stood very high in Boston society and one whom I had known from

boyhood. He vouched for Mr. Owen very strongly, though this was hardly necessary, for Mr. Owen brought to Boston such a line of credentials from men whose names are widely and favorably known that a man would be a skeptic indeed to doubt his standing. After that I saw Mr. Owen a number of times and he converted me absolutely to his plans, and not only that, but I came to have absolute faith in his integrity and honor. It was not until last spring that serious doubts were raised. At that time Mr. W. P. Pinkham, the superintendent of the plantation, came up from Mexico, and during the course of conversation let fall some remarks which Vice President Hood and myself thought demanded explanation, and we, therefore, had a meeting with him and finally secured from him the information that in his opinion all the side crops had been failures and that the earnings with which dividends had been reported to be paid did not appear on his books at the plantation.

"We both then went to Mr. Owen and demanded an immediate investigation. Mr. Owen replied that he was then going to Washington to get a representative of the government to go with him to Ubero and make a report. On his return from Mexico his report was far from satisfactory, and then we sent Mr. W. L. Wadleigh, who spent some time down there and whose report brought on the crisis in the affairs of the company. This report, by the way, was printed by us and sent to every stockholder.

"Prior to the reception of Mr. Wadleigh's report, I called in the largest stockholders, stopped all payments to the promotion companies, shut down on the sale of stock, stopped all commissions for sales, and cut down office and other expenses to a minimum. I should then have resigned my position as president, and so my counsel advised me, had it not been for the fact that I wanted to do what I could to help the stockholders win out.

"After all this had been done it seemed advisable to get in closer touch with Owen, who had gone to Europe, and I must say frankly that I had even then faith enough in him to believe that I could get him to come back and help straighten things out. Aside from this, I was very close to a nervous breakdown, and my physician told me that a short rest was imperatively necessary. In Europe I tried in every way to get in touch with Owen, by telegraph, by telephone, and by letter, but was not successful. Toward the end of my stay there one of my telegrams to Paris was answered from the United States to the effect that Mr. Owen was sailing for America on April 15.

"I want to say, now that I am here, I am doing all that I can to win out for the stockholders. I have put all of my stock and bonds into the hands of my counsel to be used for their benefit. From the time that I took charge the books have been open to the counsel of the various stockholders, and I have had assurances from the best of them that they are in full sympathy with my course and that I am doing the best that anybody could do. I must say that I do feel somewhat sensitive over the treatment of some of the stockholders, because they, as well as the promoters, were partly to blame for my ignorance of affairs down in Mexico. For example, three years ago, at a meeting of the stockholders, I had selected as the yearly inspector to make a visit to the plantation in behalf of the investors, a man who was a heavy investor himself, and a sound business man



in every way. His report on conditions there would probably have saved the company at that time could he have gone. The stockholders voted him down, however, and sent another man, who came back with a very favorable report.

"As far as this end of the business is concerned I don't very well see how I could have done much more than I have. The fact of the matter is, the Ubero companies agreed with development companies to plant so much coffee, for example, and the development companies did it. Now, that the coffee was a failure, or that the dividends paid were not earned, would be a difficult thing for us to know up here when the investigators who were sent down reported success, and when for every dividend paid, the Boston office received written evidence of sales.

"Exactly what will be the way out of this unfortunate affair I cannot even hazard a guess. Personally, I am a very decided loser in both time and money, and as I said before, if there is any way that I can be helpful in bringing the matter to a successful issue I shall certainly assist in every way in my power."

\* \* \*

A SUIT in equity has been filed in the supreme court at Boston by the receivers for the *Ubero Plantation Co. of Boston* against (1) the Old Colony Trust Co. (Boston), as trustee, (2) La Puerta Plantation Co. (an Indiana corporation), and (3) William D. Owen, to compel an accounting for moneys received from the *Ubero Plantation Co. of Boston* and to determine the title to certain lands in Mexico involved in the operations of that company. The complainants allege that Owen, who owned or held an option on lands in Mexico, organized the two corporations named above, which he controlled and managed. He then caused the lands to be conveyed to La Puerta company, after which a contract was executed to further convey the lands to the Old Colony Trust Co. as trustee, until the same should be developed, when they were to go to the *Ubero Plantation Co. of Boston*, in consideration of certain payments. It is alleged that there has been paid to La Puerta company by the plantation company \$776,426 in cash and notes, which is more than was due under the contract, and it is further alleged that the work of development contracted for has not been fully or well performed. The complainants pray for the conveyance of the lands to the plantation company, and the repayment by La Puerta company of all moneys in excess of what may be proved to have been properly due them. The Old Colony Trust Co. will defend only so far as necessary to protect itself as trustee.

\* \* \*

THE receivers already reported as having been appointed in the United States court at Boston for the assets of the *Ubero Plantation Co. of Boston* and the *Consolidated Ubero Plantations Co.* have also been appointed receivers in the court for the district of Maine, for the reason that the companies named are incorporated under the Maine laws.

Ferdinand E. Borges, who was active in the sale of the securities of the Ubero companies, has brought suit in a Boston court for \$40,000 damages, for alleged slander, against George B. Clark, chairman of a committee appointed to inquire into the affairs of the companies, and Fred C. Chamberlain, counsel for the committee.

Suits have been filed in Boston by Henry C. Parker, of Woburn, and John F. Browning, of Duxbury, against Arthur W. Stedman, former president, and Frederick C. Hood, former vice president, of the Ubero companies, for losses alleged to have been sustained in the purchase of the securities of those companies.

The Union Trust Co., receiver of the *Ubero Plantation Co.*

(Indianapolis), has filed suit in the circuit court at Logansport, Indiana, against William D. Owen, to compel the return of certain sums of money alleged to have been paid to him by the company without consideration. It is alleged that the company paid to Owen \$5151.90 in cash and assumed and paid his note for \$3500, the repayment of which sums, with interest, is asked for.—As acting president and vice president of the *Ubero Plantation Co.* Judge U. Z. Wiley, on May 17, filed a motion in the superior court at Indianapolis, to discharge the Union Trust Co. as receiver, alleging that a majority of investors desire to have the work of the company continued under the board of directors. Members of the board have subscribed for \$5000 of treasury stock since the appointment of a receiver in order that the work may not come to a standstill.

#### NEW TRADE PUBLICATIONS.

THE MANHATTAN RUBBER MANUFACTURING CO. (Passaic, New Jersey) issue a special catalogue of Rubber Covered Rolls, for paper mills, bleacheries, and other industries, which after pointing out the qualities requisite in rubber products of this class, gives details of interest in regard to the manufacture of rollers by this company, including a series of excellent illustrations which serve admirably to elucidate the text. The Manhattan company's rolls are guaranteed against corrugating, blistering, loosening from the iron, and developing soft spots. [7" X 4". 16 pages.]

THE DIAMOND RUBBER CO. (Akron, Ohio) issue a brochure entitled "Seven Years—The History of a Success," devoted to details of the growth of the facilities and production of the company since 1898. The capitalization has increased from \$50,000 to \$1,750,000; the number of employes from 250 to 1720; from 7 mills and 2 calenders their equipment has grown to 27 mills and 7 calenders, and for four years past the mill rooms have been in regular operation day and night; the engine capacity has increased from 250 HP. to 2050 HP.; and the ground area is now 18 acres as compared with less than 6 acres in 1898. Crude rubber was bought by cases of 500 pounds each by this company seven years ago; now single purchases amount to as much as 100 tons. Reference is made also to the growth of production of goods in various departments, which now embraces every line of mechanical rubber goods, while the tire department has become exceptionally large, producing tires for everything "from carpet sweepers to fire engines, and from baby carriages to motor cars." Meanwhile an extensive hard rubber department has been developed. [4" X 6". 16 pages.]

HANNOVERSCHE ACTIEN-GUMMIWAAREN-FABRIK (Hannover-Linden, Germany) issue a new price list of Mechanical Rubber Goods and Sundries manufactured by them at their principal factory and at their Solln branch (near Munich), in which special attention is given to their "Matador" brand of rubber goods, and the "Matador" Balata machinery, elevator, and conveyor belting. Several pages are devoted to some attractive designs in rubber Mats. The catalogue includes also an extensive line of Hospital Sheeting. [5 1/4" X 8 3/4". 96 pages.]

#### ALSO RECEIVED.

DE VILBISS Manufacturing Co., Toledo, Ohio.—Our New Specialties. [Atomizers, Nebulizers, etc.] 16 pages.

The Alison Co., Buffalo, New York.—The Alison Pneumatic and Cushion Rubber Leg Forms for Men. 19 pages.

John S. Leng's Son & Co., No. 33 Murray street, New York.—Catalogue of Bicycles, Tires, Bicycle and Automobile Supplies. [Embracing all the leading makes of tires, and a very full list of accessories.] 104 pages.

## THE HEAD OF THE HOUSE OF MICHELIN.

ANDRE MICHELIN, head of the great house of Michelin et Cie., with factories at Clermont-Ferrand, France, has long been promising to make a visit to the United States, but every time it comes to the test he balks at the long sea voyage. Indeed, the enterprising American representative of the house long ago told the Editor of THE INDIA RUBBER WORLD that he would soon have the honor of presenting M. Michelin to him. In lieu of this, however, he has presented a very striking likeness of the man who has done so much to make automobiling possible—through the development of the pneumatic tire—together with a few facts regarding the great rubber business of the Michelins.

The factory, founded in 1832, now gives employment to 3500 workers, and turns out 1000 tires a day. Eleven chemists are employed in the testing of the materials that go into the Michelin tires, and only the best of everything is used. It is said that three months are required to complete one automobile tire under the Michelin method, but whether a part of that time is consumed by the drying of the rubber is not stated.

The member of the firm whose portrait is here shown (Andre) is the head of the house, and is the business man. His brother Edouard is a lawyer, a chemist, and an artist of high repute. In the firm he occupies the position of manufacturing agent.

To show what a hold the Michelin tires have in their own country it is only necessary to state that 95 per cent of the tires used in the city of Paris are of this make. As for the trade abroad, it is enough to say that there is probably no automobilist in the world who does not know favorably the Michelin tire. It is rumored that in response to the demand in the United States for these tires, a large factory will soon be erected here to make them under the Michelin process.

Although the rubber trade will not have the pleasure of meeting Mr. Michelin, on this side of the water at least, most of its members are likely to come in touch with his American representative, Mr. E. D. Winans. This is particularly true from the fact that Mr. Winans has in charge the financing of the American company which will manufacture Michelin tires. Mr. Winans, although still a young man, has had rather unusual business experience, having been connected with the Rogers Locomotive Works under the direct tutorage of the late Mr. Jacob S. Rogers, and later with the Armour company, of Chicago. His interest in automobiles and their accessories dates from the time when Charles B. Cook imported the first automobile to the United States. When he decided to make his connection with the Michelin people he went to France and studied the whole question of tire manufacture and returned with their agency, and up to the present time he is understood to have sold more Michelin tires in the United States than anybody else.

A CONCERN in New York offering to supply lists of business addresses issues a catalogue of what it has to sell, from which it appears that it takes into account 66 rubber manufacturers and 787 rubber goods manufacturers. Are the 66 "rubber manufacturers" makers of Colorado rubber?

## CANADA'S WATERPROOF CLOTHING TRADE.

PREVIOUS to the spring of 1889 not one waterproof coat had been made in Canada, says *Clothier and Haberdasher* (Toronto). In that year some one from Manchester, England, started the business in Montreal of making waterproof garments of imported cloth, and for a time two men and one sewing machine were sufficient to supply the whole demand. This was the starting, by the way, of the Montreal Waterproof Clothing Co., which is still in existence and doing a large business, its owner and chief head being Harris Wener, who formed one of the original partnership. The waterproof clothing trade has grown in Canada until it now embraces the product of a dozen factories in Montreal, employing nearly 1000 operators, in addition to travelers, salesmen, and office clerks.

In the early nineties the Canadian Rubber Co. of Montreal began to experiment in proofing cloth, with the result that the Canadian rubberized fabrics are now declared to be superior to the imported goods, on account of being better suited to the rigorous Canadian climate. Prior to 1889 no Canadian cloth had been used in the manufacture of waterproof clothing. To day it is estimated that \$250,000 worth of cloth made in Canadian mills is used in making such goods. Considerable cloth is imported from Great Britain, but only a small part of it is proofed in the old country.

The Montreal Waterproof Clothing Co. were the sole manufacturers in their line in Canada for about 7 years. Subsequently a number of Canadian concerns came into existence, besides which some English manufacturers have opened branch factories at Montreal. First was J. Mandleburg & Co., who still have a strong connection with the Dominion trade. Next came B. Cohen, and lastly Isadore Frankenburg & Sons. The latter firm, however, is reported to be closing its Canadian branch.

Values of imports of clothing and cloth made waterproof with India-rub-

ber—by fiscal years ending June 30:

1893.....	285,929	1897.....	\$ 84,631	1901.....	\$170,000
1894.....	247,979	1898.....	146,502	1902.....	234,187
1895.....	171,941	1899.....	151,842	1903.....	465,454
1896.....	116,848	1900.....	152,791	1904.....	334,713

## RUBBER TIRED MOTORS IN THE DESERT.

THE motor car has found its way to Egypt, and the sirdar has made good use of it. Sir Reginald Wingate, who is making his official tour of inspection in state of Suakim and the surrounding cities over which he has control, may be accredited with having introduced the motor car to the desert. Sir Reginald, who spends some three months every year at Dunbar, in Haddingtonshire, took up the automobile question in real earnest last summer. A series of experiments were carried out on the Belhaven sands, with a view to solving the question of traversing the desert. A solid tire, with an exceptionally broad tread, was successfully tried, and the sirdar had these fitted to a car which he took back with him to Egypt in the autumn. The broad tread prevents the wheels from sinking in the sand, and is a much quicker mode of progression than the time honored camel.—*Home and Colonial Mail*.



ANDRE MICHELIN



## NEW GUAYULE RUBBER PROCESS.

THE Compañía Explotadora de Hulé (India-Rubber Exploiting Co.) has been formed in Mexico City for extracting rubber from the Guayule plant (*Parthenium Argentatum*), by the process of E. Delafond, a member of the French Société des Chimistes et Ingénieurs Civils. M. Delafond is understood to have obtained a liberal concession from the state of Coahuila (Mexico), conditioned upon the early erection of factories having a certain capacity. M. Delafond informs THE INDIA RUBBER WORLD that the company expect within a very short time to have in operation four factories, working 80 tons of the plant daily, and they have contracts for the supply of the plants for 20 years. The first factory probably will be at Cuatro Ciénegas. He states that the plants are self reproducing and grow in almost arid soil above an altitude of 1250 meters [=4101 feet]. He believes however, that the plants could be improved to a large extent by cultivation. The percentage of rubber is high, and the product is much appreciated in Germany. He states that the rubber is easily vulcanized and does not afterward deteriorate.

In the Delafond extracting process the entire plant is first pulverized. When powdered, the material is freed from dust and sand by mechanical means. It is then placed in an apparatus in which it is heated to a temperature at which the resinous parts are melted, and at the same time subjected to pressure, with the result that the molten resinous parts are absorbed by the particles of wood, which play the part of absorbents, and thus make it possible to leave the rubber almost clean and free from resinous matter. When taken out of the compressor, the whole mass is transferred to an apparatus by which the vesicular parts of the rubber become agglomerated, while the wood, the resinous matter, and other impurities are completely separated from the rubber. This is an entirely dry process, as the steam used for heating does not come in contact with the material treated. The residue is used as fuel. The rubber is afterwards more thoroughly purified by water, either at the works, or in some place where water is found, in case there should be a dearth of it at the extracting plant.

M. Delafond informs THE INDIA RUBBER WORLD:

"I have received Congo *lianes*, as well as plants from Madagascar and from India, and I have determined to a certainty that my mechanical process makes it possible to extract all the rubber contained in these plants at an incredibly low cost. All such plants, herbs, *lianes*, and shrubs as contain rubber and which are not worked by means of incisions, can be very well worked by means of my devices. I may even go a step farther and state that I believe the treatment of the rubber trees by my process to be preferable, excepting those from which the rubber is now gathered by means of incisions. The output would thereby be increased tenfold."

He has taken out patents in all rubber producing countries, but his contract with the Cia. Explotadora de Hulé covers Mexico only, and he is willing to enter into negotiations for the formation of companies in other countries.

## THE MARX PROCESS.

MAX MARX, of Heidelberg, in his British patent specification (No. 28,051—1904), states that the process of recovering rubber from Guayule by treating the macerated plant with naphtha or like solvents has the combined disadvantage of not bringing all of the rubber into solution, and of including with the rubber the injurious resin, besides which the process is extensive on account of the large quantities of costly solvents required. By his process the ground wood is heated with three times its weight of a comparatively dilute solution of alkali—say a 6 per

cent. caustic soda lye—and kept at boiling point for about 6 hours. On the cooling of the concoction the rubber floats to the surface, and may be removed by skimming and freed from the alkaline lye by the aid of boiling water or other suitable means. The principle of treating plants containing Gutta-percha with alkali to render them more suitable for the subsequent extraction of the product with solvents is already known, but apart from the fact that an entirely new raw material forms the subject of the present process, the important novelty therein consists in the fact that the rubber is directly extracted from the plant by means of the alkali, and forms a usable material without further treatment.

\* \* \*

A CORRESPONDENT OF THE INDIA RUBBER WORLD in Europe mentions the departure for Mexico of Herr Gutrae, one of the engineers of the Vereinigte Gummiwaaren-Fabriken, Harburg-Wien, employed at their Linden works, to take part in erecting and starting factories for the Compañía Explotadora de Caucho Mexicano.

## FINANCIAL STRESS AT MANAOS.

THE message of the governor of the Brazilian state of Amazonas, Dr. Constantino Nery, presented to the congress at Manaus on April 15, pointed to the need of a new foreign loan, owing to the changed financial conditions of the state as outlined in the message. It appears that the revenue of Amazonas is decreasing, although the governor is not prepared to determine how far the decline may extend. The treasury was very prosperous for the fiscal years 1903 and 1904, as these figures (denoting milreis) will indicate:

	1903.	1904.
Estimated receipts.....	14,465:000\$000	14,439:000\$000
Actual receipts.....	18,290:066\$556	19,995:641\$998
Estimated balance.....	397:880\$060	364:501\$700
Actual balance.....	3,825:066\$566	5,566:634\$998

The heavy results obtained than were estimated were due to the heavy increase in the selling price of rubber, the state revenues being derived mainly from an *ad valorem* export tax on all the rubber produced in the state. The following figures are given as the average quotation for rubber—in milreis per kilogram—during the two years:

	Fine.	Coarse.	Caucho.
In 1903.....	6\$381	4\$452	3\$821
In 1904.....	7\$512	5\$199	4\$283

After the organization of the Acre territory into federal districts, administered from the national capital, the rubber produced there was no longer subject to taxation at Manaus. The amount of such rubber which escaped this tax during the latter part of the fiscal year 1904 is estimated at 2261 tons. The effect of this new fiscal arrangement is better illustrated by the revenue returns for the first quarter of 1905, amounting to only 5,564:027\$486, as compared with 8,125:054\$790 in the same months of 1904, or a decrease of 2,561:027\$304.

The governor proposes the revocation of the law imposing special tax of 180 reis per kilogram of rubber produced in the state for the benefit of the Banco Amazonense, which was created a year or so ago. Not that the tax is to be abolished, but it is to be collected henceforth by the state, to be applied to the service of the proposed new loan, together with the income from leasing the Manaus city railway and electric light services, for which competitive bids were recently asked. The last recent important financial operation of the state was exploiting in New York and London a loan for the purpose of taking over the Manaus railway and electric light and water services, on the ground that they could be administered more economically by the city than otherwise.

## NEW GOODS AND SPECIALTIES IN RUBBER.

## THE THERMALITE BAG.

THE rubber hot water bag, so long recognized as affording the most efficacious means of applying heat for certain purposes, now has a rival, the field for which is due to the alleged frequent lack of wholly satisfactory results from the water bag, because of the fact that the temperature continually decreases, requiring frequent change of application.



It is true that the new bag is made of rubber, having the general appearance of those now so widely used, the difference being in its contents. The basic principle of the new article is the storage of heat by means of salts which readily melt or liquefy. That is to say, a certain solution of crystalline salts—chiefly consisting of acetate of sodium—gradually gives off heat which it has absorbed in melting, upon recrystallization. In order that the body of salts in crystallizing be not reduced to a compact form, but that it should have a soft, pliable texture, glycerine is added, causing the mass to assume the consistency of moist sand, which is yielding and will conform to the shape of the bag. To prevent damage from the sharp small crystals to the sides of a rubber bag, viscous substances from certain vegetable seeds have been added to the mass.

Applied to a warming bag, this system gives a uniform heat, maintaining the ideal temperature of about 135° F. for several hours. The contents of a Thermalite bag used with reasonable care never require changing or renewing; there is nothing to leak; it will not scald or irritate the person or burn the clothing; it is always in readiness for use. The contents of the bag require to be boiled to a certain point, when the process of crystallization is suspended, and will be kept thus until such time as it is desired to use the bag, when the crystallization is started again by the simple method of withdrawing and replacing the stopper. At least this is all that the user has to do; whether the mere admission of air to the solution starts the change, the proprietors decline to state, on the ground that it would not be proper to reveal the subject of certain patents now pending. The stopper used, by the way, is similar in appearance to those in ordinary hot water bags. A bag may thus be put in readiness for use at any time in the future, and be applied satisfactorily in the absence of any such conveniences as would be required for heating a water bag. It is desirable to knead the the bag before using, but this is only to distribute the contents equally throughout the bag.

The discovery upon which this article is based, made originally in France, was perfected in Germany, where it is being utilized by the Deutsche Thermophor-Aktiengesellschaft (Andernach, Germany), a company founded in 1899, with 730,000 marks capital. The details of the discovery having been widely patented, the American rights have been acquired by a company in this country by a somewhat different name, which has undertaken actively to create a market. The price of the Thermalite bag is not essentially higher than that of the ordinary hot water bag. The United States patents thus far are: No. 683,851—October 1, 1901, issued to C. Cronenburg, and No. 726,204—April 21, 1903, issued to Ignaz Timar, but these are stated not to cover all the details of the article now offered. [The Thermalite Co., Nos. 161-165 Elm street, New York.]

[ONE of the leading manufacturers and marketers of rubber hot water bottles, when asked by THE INDIA RUBBER WORLD for an opinion of the Thermalite bag, said:

"I cannot see how it will menace the supremacy of the hot water bottle. It is novel, and to my mind its chief claim to attention lies in that characteristic. It cannot be any cheaper, as the rubber bag used costs as much as if it were to hold water, while the chemicals are certainly as expensive as hot water. Then too, it is a bother to get a big kettle of water and set it boiling for the purpose of getting the heat into the Thermalite. It would seem to me much simpler and quicker to fill a bag with hot water, which in the modern home is always on tap. The one point in favor of Thermalite that occurred to my mind when I first had it brought to my attention was that it was a solid, and therefore could not flow out of a leaking bag. But as I now understand it, that solid when hot is liquefied, and only regains its solid form when it gives up its heat. Personally I should be just as willing to be scalded by hot water as hot melted salts, although with high grade bottles neither is necessary."

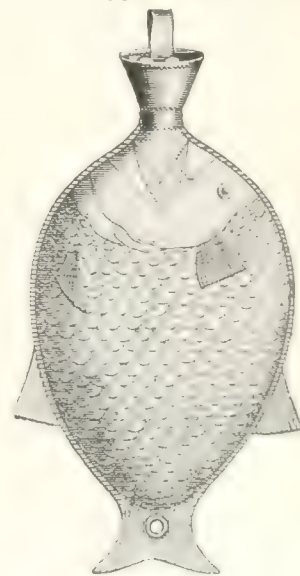
Another important manufacturer in the same line said that he believed the success of the new article would be found to lie in the selling organization of the company marketing it. Marked selling ability might succeed in bringing about a large demand. In this event, the rubber trade would not be sufferers. His own firm had made already some of the Thermalite bags.]

## TWO NEW DESIGNS IN WATER BOTTLES.

It would seem as if the limit of inventive ability had almost been reached in the line of hot water bottles, but every now and then new and artistic designs appear and novel accessories are added. The "Common Sense" bottle, for example, has a series of ribs made of rubber, four in number, running across the bag almost to binding, the idea being to so stiffen the rubber surface that it will hold its shape whether it is full or only partially full of water. The idea is exceedingly simple and really practical, for the reason that in many cases the ordinary bag, especially in the larger sizes, bulges so as to render it difficult to keep in place. Another and even newer type of hot water



COMMON SENSE.



FISH DESIGN.



bottle, which varies from the others chiefly in design, is known as the "Fish Design." At first thought this might not appeal to everybody, but in reality the bottle is pleasingly unique and really artistic. The mouth of the bottle represents in a measure the head of a fish which is decidedly of the pout order. The surface of the bag, instead of having the usual fine corrugations, shows a series of scales, while two-thirds of the way down the bag are a pair of fins which serve excellently in handling the bag when it is full of hot water, the tail of the fish bag taking the place of the usual tab by which the bottle is hung up when not in use. Both of the above bottles are made in the usual standard sizes and in the special maroon rubber for which the Goodyear's India Rubber Glove Manufacturing Co. (New York), the makers, are widely famous.

#### THE DE VILBISS PERFUME DEMONSTRATOR.

THIS article is designed for the convenience of dealers in demonstrating perfumes for the benefit of customers, and also for the sake of the economy which its use involves. The old way of demonstrating perfume by shaking off the cork and waiting until the alcohol has evaporated necessitates a waste of perfume and a loss of time. The DeVilbiss perfume spray-gives life to the perfume and im-

parts fragrance in a satisfactory manner. By compressing the bulb with one finger over the spraying point all the fluid in the spraying tube is returned to the bottle, which makes a saving of one or two drops at each demonstration. This appliance is also adapted for spraying insecticides or deodorizing and disinfecting solutions in the sick room. A seamless bulb is used which is guaranteed not to split or crack. [De Vilbiss Manufacturing Co., Toledo, Ohio.]

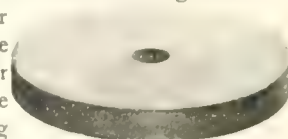
#### MOTZ'S VEHICLE TIRE.

THE illustration relates to a solid rubber vehicle tire which is secured in the undercuts of a channeled rim by diagonally-extending cross wires, arranged in parallel position. When the tire is being applied to the rim the diagonally-extending wires will yield or give sufficiently with the rubber, where pressure is applied, to allow the tire to enter the channel. The ends of the wires will then extend under the converging flanges of the channel rim. It has been found that under severe longitudinal strain, solid rubber tires of light construction are liable to stretch, and at the same time to narrow in cross section, so as to permit the tire to disengage the undercut portion of the channel. In order to overcome this difficulty, endless circumferential wires are placed inside the channel rim, and over the ends of the diagonal cross wires, outside the elastic tire. The illustration shows the model of tire preferred by the inventor; it also shows, through the removal of a portion of the solid rubber, the position of the diagonal and the circumferential wires. United States patent No. 763,996 has been issued to Charles A. Motz, who has pending an application for

a further patent covering modifications of this tire. [Motz Clincher Tire and Rubber Co., Akron, Ohio.]

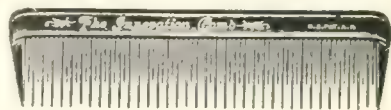
#### SPRINGFIELD ABRASIVE POLISHING WHEEL.

THESE wheels are intended for putting a high polish on cutlery, edge tools, or metal of any kind, after the roughness has been taken off with an all-emery or carborundum wheel. They are made of a compound into which rubber enters, with a view to preventing the emery from scratching or marring the metal. Carborundum is used in these wheels when the parties ordering them desire it. These wheels are recommended for removing rust spots, as well as for putting a high polish on metal goods of any kind. They have only recently been placed upon the market, but are understood to have met with a good demand. An application for a patent is pending. [The Springfield Tire and Rubber Co., Springfield, Ohio.]



#### THE "INNOVATION" COMB.

THE illustration herewith relates to something absolutely new in the way of combs. According to some hair specialists a comb with sharp teeth should never be used, or a comb with teeth too close together. The hair should first be disentangled with a coarse comb, after which a semi coarse comb should be used. The "Innovation" comb has been designed to meet these requirements, and as will be seen from the illustration has the fine or semi coarse teeth set back from the line of coarse teeth. The length in which these combs are supplied is 8 inches. Patents have been secured in the United States and the principal countries in Europe. [The Hanover Rubber Co., Limited—George Borgfeldt & Co., New York.]



#### RUBLAIN FLOORING.

RUBLAIN is a term made up from the words rubber and porcelain, to designate a new article of flooring formed of a combination of these substances. Rublain is made by combining, by means of hydraulic pressure and vulcanization, rubber and ceramic mosaics, different colored mosaics being assembled to produce ornamental designs. In the process of manufacture the rubber is forced into all the interstices between the ceramic mosaics, at the same time spreading a sheet of rubber  $\frac{1}{8}$  inch thick on the under side of the design. This flooring is referred to as being adapted to be laid on any foundation, old or new wooden floors, or upon concrete; when additions are required they can be made readily and the new cannot be distinguished from the old. The ceramic mosaics are indestructible, and in adhesive properties the rubber is asserted to excel the best Portland cement. Any design required may be made without the use of special molds or dies, and an unlimited field exists for color schemes. A floor of this material was laid in one of the buildings of the St. Louis Exposition in 1904, and was walked over by thousands of persons daily. It was awarded a gold medal, and is now in the office of the manufacturers in good condition. This new flooring and the process of manufacture are protected by patents. [The Trent Tile Co., Trenton, New Jersey.]

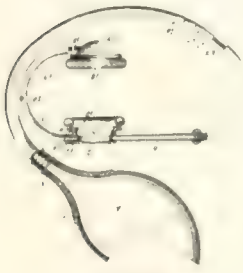
JAPAN.—A new schedule of import duties will take effect on July 1, 1905, when an advance will be made on most items. Rubber belting and hose will then be dutiable at 15 per cent. *ad valorem*, instead of 10 per cent. as at present.

## RECENT RUBBER PATENTS.

## UNITED STATES OF AMERICA.

ISSUED APRIL 4, 1905.

**N**O. 786,280. Shoe polisher. H. E. Gartrell, Chicago.  
 786,343. Golf ball. [A hollow sphere, made of 70 per cent. pure celluloid and 30 per cent. lead carbonate.] C. de Buren, Geneva, Switzerland.



786,458.

786,458. Conversation tube. [For use by the deaf.] A. W. Nicholls, Chicago.

786,470. Pneumatic tire. I. Tennant, assignor to Tennant Auto Tire Co., both Springfield, Ohio.

786,524. Golf ball. [Comprising a core of thin strips of India-rubber wound under tension and a Gutta percha inclosing shell.] F. A. Seiberling, Akron, Ohio.

786,527. Manufacture of a substitute for Caoutchouc. [A solution of amber colophonium in castor oil is subjected to the action of sulphur while at a high temperature; ozone is passed through the solution, and the whole finally treated with chloride of sulphur in the presence of a solvent and calcium carbonate.] H. Spatz, Schöneberg, Germany.

786,529. Device for applying remedies. D. A. Stapler, San Francisco, Cal.

786,533. Electric exercising appliance. W. Sutton and S. Lord, Liverpool, and W. S. Kerr, Southport, England.



786,611.

786,611. Tire shoe setter. R. Threlfall, Newton, Mass.

786,612. Automobile or bicycle wheel. [Combining a metallic and a wooden rim, with an intermediary elastic cushion.] O. R. Van Doren, Newark, N. J.



786,533.

786,684. Fire hose nozzle. W. B. Runbeck, Washington, D. C.

786,697. Syringe. F. Wackenhuth, New York city.

ISSUED APRIL 11, 1905.

786,829. Felly tire set. [Felly in segments, separated by elastic cushions.] E. N. McComb, Hamilton, Canada.

786,929. Pipe or hose coupling. W. J. Williams, Baldwin township, Allegheny county, Pa., assignor of one half to W. T. Waite, Pittsburgh.

786,930. Pneumatic mattress. [Comprising an air chamber, with means for inflating it.] R. B. Wiltsie, Toledo, Ohio.

786,959. Inkstand. Emory Davis, New York city.

786,967. Fountain pen. S. H. Hodges, South Glens Falls, N. Y.

786,985. Fountain brush and connection. A. W. Nicholls, Chicago.

787,010. Rubber patch [for tires and the like]. C. O. Tingley, Rahway, N. J.

787,118. Water bottle stopper. M. C. Schweinert, West Hoboken, N. J., and H. P. Kroft, New York city.

787,127. Mouthpiece for clarinets. F. Starke, Chicago.

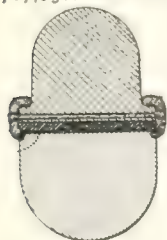
787,152. Self filling fountain pen. J. T. Davison, Brooklyn, N. Y.

787,167. Respirator. W. G. Gates, Fort Benton, Mont.

787,173. Tire [with broad, flat, and substantially solid tread]. G. H. Hastings, Oporto, Portugal.

787,210. Wheel [with attachable flange plate for securing tire]. J. B. McMullen, Howard county, Md.

787,250. Artificial leg [comprising rubber cushioning blocks]. C. B. Winn, Buffalo, N. Y.



787,362.

787,298. Inflation valve [for tires and the like]. J. E. Keller, Jr., Litchfield, Conn.

787,311. Tire for vehicle wheels. [Comprising a series of spring members, combined with resilient material.] E. A. Scribner, assignor of one fifth each to J. W. Krekeler, W. W. Walters, R. W. Jean, and F. S. Ross—all of Detroit, Mich.

ISSUED APRIL 18, 1905.

787,362. Vehicle tire and rim. F. Feldhaus, assignor of one half to P. Knerim, both of Akron, Ohio.

787,388. Carpet cleaning apparatus. [Pneumatic system.] A. E. Moorhead, Oakland, Calif.



787,473.

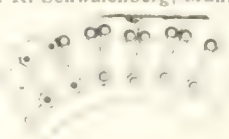
787,389. Pneumatic cleaner. *Same.*

787,415. Storm shield for vehicles. W. W. Warner, Cincinnati.

787,473. Air cushion. C. R. Schwalenberg, Mannheim, Germany.

787,491. Tire. C. A. Brackelsberg, Düsseldorf, Germany.

787,515. Toy air ship. L. H. Hunter, San Francisco.



787,491.

787,518. Cleaning rubber. [Adapted to the product of the "Guayule" plant of Mexico, and like shrubs.] W. A. Lawrence, assignor to Continental Rubber Co., both of New York city.

787,529. Hose connector. K. O. Muehlberg, Homestead, Pa.

787,600. Tire tread. J. R. Whittemore, Erie, Pa.

787,683. Vapor or shower bath attachment for bath tubs. H. L. Lazzelere, Rochester, N. Y.

787,694. Syringe. [Vaginal.] W. H. Pontious, Chicago.

787,761. Inner tube [for tires] and means for inflating same. W. A. and H. S. Hollis, Hove, England.

ISSUED APRIL 25, 1905.

787,800. Combined mop head and wringer. C. R. Carpenter, Racine, Wis.

787,808. Vehicle tire. [With leather protection for tread.] L. C. Cummings, Brookline, Mass.

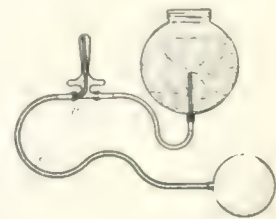
787,920. Medical apparatus. F. Hofmann, New York city.

787,951. Milking machine. W. Sim, Underwood, New Zealand.

788,073. Surgical pad. H. O. Sommer, Washington, D. C.

788,083. Pneumatic tire. E. B. Workman, Woodward, Okla.

788,090. Tire. [Applies to a cover for a pneumatic tire.] L. F. Braine, Newark, N. J.

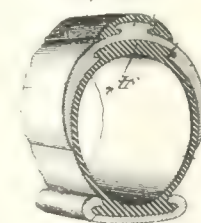


787,920.

788,176. Syringe. W. F. Traves, assignor to the Duplex Rubber Co., both of Cleveland, Ohio.

788,191. Elastic heel protector. D. H. Deery, assignor of one half to C. J. Mercer, both of Bridgeport, Conn.

788,215. Spare tire receptacle for automobiles. G. E. Mitchell, Chelsea, Mass.

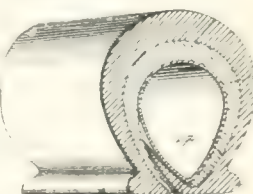


788,309.

788,245. Punching bag. A. F. Burrt, assignor to the Draper & Maynard Co., Plymouth, N. H.

788,298. Flexible elastic binder. C. T. Whitsett, Indianapolis, Ind.

788,306. Pneumatic tire. G. Devoll, Boston, Mass., and G. H. Risley, Brielle, N. J.



788,309

788,309. Tire. R. W. Ferguson, West Orange, N. J.

788,379. Method of rock facing. A. L. Rich, Pittsburgh.

788,468. Method of manufacturing golf balls. R. Hodgkins, Malvern, Victoria.

[NOTE.—Printed copies of specifications of United States patents may be obtained from THE INDIA RUBBER WORLD office at 10 cents each, postpaid.]

## GREAT BRITAIN AND IRELAND.

## PATENT SPECIFICATIONS PUBLISHED

The number given is that assigned to the Patent at the filing of the Application, which in the case of those listed below was in 1904.

\* Denotes Patents for American Invention.

[ABSTRACTED IN THE OFFICIAL JOURNAL, A. I. R., 1905.]

27,009 (1903). Heel protector. J. T. Sutcliffe, Padiham, Lancashire.

27,065 (1903). Repair patch for tires. F. L. Woodgates and T. W. Jourdan, Tiverton.

27,072 (1903). Body guard for cricketers. R. H. Fish and H. Peace, Horbury.

27,078 (1903). Leather protector for pneumatic tires. D. Couderachel and J. Billet, Paris, France.



- 27,085. Rectal appliance. [Piston of vulcanite.] W. P. Thompson, London. (Communicated from Holland.)
- 27,141 (1903). Heel protector. T. Rappitt, Wellingboro.
- 27,166 (1903). Boot heel and sole. B. Littenberg, Riga, Russia.
- 27,177 (1903). Vehicle tire [formed of helically coiled springs within an inflatable tube]. F. H. Sterling, London.
- 27,178 (1903). Vehicle tire. [Comprising a modification of the preceding.] *Same*.
- 27,187 (1903). Pneumatic tire [rendered easily detachable and prevented from creeping by the form of the wheel, which consists of two pressed steel discs]. J. V. Johnson, London. (Communicated from France.)
- 27,202 (1903). Means of coating fabrics. [The spreading knives of machines for coating fabrics with waterproofing materials are replaced by rollers driven at surface speeds different from those of the main rollers.] Velvrl Co., London, and J. S. R. Howkins, Thornton Heath.
- 27,247 (1903). Heel protector. F. H. Barker, Todmorden.
- 27,265 (1903). Insulation of telegraph poles. Sir Oliver J. Lodge, Birmingham, and A. R. Hardie, London.
- 27,320 (1903). Pneumatic tire [with anti-slipping loops of stranded steel wire]. H. S. Eyre, St. Leonards-on-Sea.
- 27,391 (1903). Device for inserting and withdrawing the safety bolts used to secure tire covers. E. Michelin, Clermont-Ferrand, France.
- 27,444 (1903). Horseshoe pad. J. J. Gazzard and W. F. Kendall, Streatham, Surrey.
- 27,448 (1903). Pneumatic tire [with protective shield of woven wire]. F. Hoad, Portsmouth.
- 27,499 (1903). Heel protector. W. H. Simons, Maidstone, Kent.
- 27,524 (1903). Pneumatic tire [with nonslipping device]. C. H. Wilkinson, Huddersfield.

[ABSTRACTED IN THE OFFICIAL JOURNAL, APRIL 12, 1905.]

- 27,260 (1903). Cow milker. G. Hutchinson, Seatoun, Wellington, New Zealand.
- 27,707 (1903). Stylographic pen. L. Schiff, Neuendorf, Germany.
- 27,716 (1903). Solid rubber tire and means of attaching. A. T. Collier, St. Albans, Hertfordshire.
- 27,723 (1903). Elastic tire. P. J. Trooquette, Brussels, Belgium.
- 27,871 (1903). Solid rubber tire [having the retaining wires imbedded in tubes to protect the rubber]. L. Batty, Sheffield.
- \*28,012 (1903). Folding hot water bottle [for warming nursing bottles and the like]. H. E. Peterson, New York.
- \*28,149 (1903). Vacuum house cleaning appliance. G. Clements and J. M. Hostler, Chicago.
- 28,151 (1903). Valve. I. Coalbank and J. Sherville, Teddington, Middlesex.
- 28,152 (1903). Golf ball. C. T. Kingzett, Chislehurst.

### THE FRENCH REPUBLIC.

#### PATENTS ISSUED (WITH DATES OF APPLICATION).

- 348,192 (Nov. 22, 1904). U. A. Marga. Water, fire, and acid proof insulating material.
- 348,070 (Jan. 27). J. Renard. Machinery for the manufacture of rubber covered wooden heels.
- 348,156 (Nov. 23). A. Paul. Device for closing toy balloons.
- 348,301 (Nov. 21). G. Hallam de Nittis and V. Loiret. Multiple air tube for automobiles.
- 348,307 (Nov. 26). V. E. Belledon. Flexible vehicle tires.
- 348,326 (Nov. 28). A. Cadot. Air tube protector.
- 348,374 (Nov. 30). A. T. Collier. Elastic tires for vehicle wheels.
- 348,376 (Nov. 30). H. H. Taylor. Elastic tired wheel.
- 348,583 (Dec. 5). E. G. Rassinier. Reinforcing band for repairing pneumatic tire covers.
- 348,636 (Dec. 8). R. J. Routledge. Protecting device for pneumatic tires.
- 348,681 (Nov. 21). P. Magnus. Pneumatic tire.
- 348,725 (Dec. 9). Hannoversche Gummi-Kamm Compagnie A.-G. Repair part for tire inner tubes.
- 348,764 (Dec. 10). P. Boursier and E. Deleamont. Protecting device for pneumatic tires.
- 348,917 (Dec. 14). J. C. de Janisch. Pneumatic tire cover.

### THE GERMAN EMPIRE.

#### PATENTS GRANTED.

- 160,376 (Class 34k). Closet seat with rubber ring. C. Henke, Witten a/d Ruhr. March 29.
- 160,662 (Cl. 39a). Device for making treads of pneumatic tires. F. Veith, Höchst Odenwald. April 12.

#### DESIGN PATENTS GRANTED [GEBRAUCHSMUSTER.]

- 246,081 (Class 38k). Tightening device with rubber ring for wood dyeing and impregnation. Brüder Naschauer, Mies, and O. Kraus, Vienna, Austria. March 29.
- 246,241 (Cl. 44b). Mouthpiece for tobacco pipe. New York-Hamburger Gummiwaaren Co. March 29.
- 246,046 (Cl. 47f). Tightening ring. S. Herz Gummiwaaren Fabrik, Berlin. March 29.
- 245,998 (Cl. 63c). Pneumatic tire. Asbest- u. Gummiwerk Alfred Calmon, A.-G., Hamburg. March 29.
- 249,967 (Cl. 63k). Rubber and textile strap for motor cars. Etablissement Hutchinson, Mannheim. March 29.
- 246,232 (Cl. 71a). Rubber shoe with buckles. F. Hartkopf, Obligs. March 29.
- 246,676 (Cl. 38/). Rubber shoe to prevent ladders from slipping. Mannheimer Gummi-, Guttapercha- u. Asbest-Fabrik. April 5.
- 246,428 (Cl. 63k). Pneumatic handle for cycles. L. Schmitt, Mannheim. April 5.
- 246,411 (Cl. 70c). Ink well. Gummiwerk "Elbe" A.-G., Piesteritz. April 5.
- 246,666 (Cl. 71a). Wooden shoe sole with rubber covering. H. Frielitz, Waldenburg. April 5.
- 246,824 (Cl. 71a). Boot with elastic goring. F. Kriz, Leipzig. April 5.
- 246,571 (Cl. 74d). Automobile horn. F. Rating, Mulheim a/Ruhr. April 5.
- 247,334 (Cl. 11e). Rubber band for portfolio. C. Gemsinder, Weisbaden. April 12.
- 247,036 (Cl. 30v). Articulator. G. Poulson, Hamburg. April 12.
- 247,059 (Cl. 30d). Pessary. [Hard rubber rod for prevention of conception.] R. Heise, Spandau. April 12.
- 247,170 (Cl. 30g). Baby pacifier. T. Jagusch, Brzozowitz-Grube. April 12.
- 247,187 (Cl. 63e). Tire inner tube. F. Lieber and A. Bohnsted. Frankfurt o/M. April 12.
- 247,258 (Cl. 65a). Life saving device. C. J. Wegner, Prädikow. April 12.
- 247,023 (Cl. 77a). Exerciser. Vereinigte Gummiwaaren-Fabriken, Harburg-Wein, Wimpasing. April 12.
- 247,147 (Cl. 68d). Water jet regulator. H. Paetow, Hamburg. April 12.
- 247,749 (Cl. 3a). Corset with rubber braid. Spiesshofer & Brown, Heubach. April 19.
- 247,472 (Cl. 63e). Rubber tire for rear wheels, with broad flat tread. St. Helens Cable Co., Ltd., Warrington, England.
- 247,473 (Cl. 63e). Rubber tire for front wheels with round tread. *Same*. April 19.
- 247,819 (Cl. 64a). Non-refillable bottle with rubber ring. J. B. Smith, Aylmer. April 19.

#### PATENTS APPLIED FOR.

- 26,135 (Class 39b). Process for the production of rubber. Max Marx, Heidelberg. April 12.
- 32,993 (Cl. 33c). Comb. Hannoversche Gummi-Kamm Compagnie, A.-G., Limmer-Hannover. April 5.
- 10,017 (Cl. 63e). Tire inner tube. F. Veith, Höchst Odenwald. April 5.
- 5,268 (Cl. 39a). Machine for trimming hard rubber bottle stoppers. E. Rouge, Frankfurt o/M. March 29.
- 37,418 (Cl. 63e). Process for making pneumatic tires. T. Birtwisle, Pendleton, England. March 29.
- 19,950 (Cl. 63e). Pneumatic tire with metal protector. Société Anonyme des Pneumatiques Cuir "Samson," Paris. April 12.
- 27,786 (Cl. 63e). Metal protector for pneumatic tires. B. F. Kenna, Philadelphia, United States. April 19.
- 7,477 (Cl. 63e). Tire with automatic puncture closer. P. G. Nadig, Paris. April 19.
- 11,525 (Cl. 63e). Pneumatic tire. C. Andrevert, Vitry (Seine), France. April 19.
- 19,407 (Cl. 63e). Protector for pneumatic tires. E. Lapisse, Elbeuf, France. April 19.

# GOODRICH RUBBER GOODS AWARDED



## GRAND PRIZE HIGHEST AWARD



# NEW YORK BELTING *and* PACKING CO., Ltd.

Manufacturers of the highest grades of

## ALL KINDS OF HOSE

✧ INCLUDING ✧

Air Brake, Air Drill, Brewers', Car Heating, Dredging Sleeves  
Engine and Tender, Fire, Garden, Gas, Linen, Mill, Pneumatic Tool  
Signal, Steam, Suction and Water Hose

Also a complete line of fine Mechanical Rubber Goods

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Nos. 91-93 Chambers Street, New York

*Mention The India Rubber World when you write.*

## RUBBER BELTING.

"SHIELD HIGH GRADE" BRAND.

Every foot guaranteed  
in strongest possible  
manner.

We make everything in rubber.



Our warrant is indelibly  
stamped upon every Belt  
to protect the user.

Write for catalog and prices.

THE MECHANICAL RUBBER COMPANY,  
CLEVELAND, OHIO.

## THE UNITED STATES RUBBER CO.'S ANNUAL REPORT.

THE thirteenth annual meeting of the stockholders of the United States Rubber Co. was held at 12 o'clock M., on May 16, at the registered offices of the company in New Jersey, at New Brunswick. The annual reports of the president and treasurer were presented and accepted, and directors elected for the ensuing year. The official reports are presented herewith in full:

## PRESIDENT'S ANNUAL REPORT.

NEW BRUNSWICK, NEW JERSEY, MAY 16, 1905.

TO THE STOCKHOLDERS OF THE UNITED STATES RUBBER COMPANY: The prosperity which a year ago your president ventured to predict for the United States Rubber Company has been more than realized, as is shown by the treasurer's report hereto appended.

PROFITS.—The net profits of the business for the year, amounting to \$3,761,922.63, are more than double those of the preceding year, and this in face of the prevailing high prices for crude rubber, unprecedented in the history of the rubber industry.

VOLUME OF BUSINESS.—The net sales of the company for the year were \$32,931,210.86 as against \$33,396,918.88 for the previous year, a slight decrease, yet largely in excess of any year other than the one preceding this.

EMPLOYE'S PROFIT-SHARING PLAN.—The demonstrated result of the employes' profit-sharing plan is most gratifying. The market value of the preferred and common stock which was distributed among our employes represents from two to four times the price at which it was allotted, while the interest, energy, and loyalty of these employes abundantly shows the wisdom of this important step.

ECONOMIES IN MANUFACTURING.—The work which was aggressively started in this connection three years ago has produced results this year much greater than heretofore, and your president wishes especially to recognize the efforts of our superintendents and others who have been instrumental in bringing about this most desired result, which has been

accomplished, and at the same time the high standing of our goods maintained.

DIVIDENDS.—From the organization of the company in 1892, until 1901, regular dividends had been declared upon the preferred stock, and occasional dividends upon the common stock. For reasons heretofore given, dividends were suspended for a time upon both classes of stock, and your directors felt it unwise to resume dividends until they could feel morally certain of maintaining them. Consequently, with the desire of preserving this caution, dividends, when resumed a year ago, were declared at the rate of 6 per cent. upon the preferred stock. Upon finding that the result of the year's business showed a net profit of about 16 per cent. on the preferred stock, your directors felt it their duty to make up in the last dividend of this year sufficient to give the preferential stockholders the full 8 per cent. dividend to which they are entitled and thus place the stock upon an 8 per cent. basis.

FUNDED INDEBTEDNESS.—Three years ago the floating indebtedness of the United States Rubber Company and its subsidiary companies was funded into \$12,000,000, three-year funding notes—\$2,000,000 of which had been paid from earnings previous to this year. At the maturity of these notes, March 15, 1905, \$2,000,000 more were paid off, and the remaining \$8,000,000 were extended for a further period of three years.

CRUDE RUBBER.—Owing to the increased uses to which crude rubber is being constantly applied and the much higher range of prices resulting therefrom, it has been thought expedient for the company to provide independent facilities for procuring its requirements of this article, and to this end the General Rubber Company has been organized and put into successful operation, establishing our own houses at Pará and Manáos, thus giving our company advantages as to prices, and guarantee as to supply, not at the present time enjoyed by any other consumer in the world.

The increase in our merchandise account, as also in current payables, this year over last, as shown in the treasurer's statement, is largely ow-

## TREASURER'S REPORTS.

## UNITED STATES RUBBER CO. AND SUBSIDIARY COMPANIES

CONSOLIDATED GENERAL BALANCE SHEET, MARCH 31, 1905.

## ASSETS.

Property and plants.....	\$47,660,697.76
Inventories, Mfd. goods and materials..	\$20,715,378.64
Cash .....	2,211,292.27
Bills and loans receivable.....	2,979,814.31
Accounts receivable .....	7,530,807.11
Securities owned.....	4,123,565.39
Miscellaneous assets.....	587,656.84
Total Assets.....	\$85,809,212.32

## LIABILITIES.

Capital Stock, Preferred.....	\$23,525,500.00
Capital stock, Common.....	23,666,000.00
Boston Rubber Shoe Co., debentures.....	4,800,000.00
U. S. Rubber Co., Funding Notes.....	8,000,000.00
Fixed Surpluses (Subsidiary companies) ..	8,134,849.37
Loans and notes payable .....	\$6,521,387.50
Merchandise accounts payable.....	5,763,494.35
Deferred liabilities.....	87,487.11
Reserve for depreciation of securities.....	500,000.00
Reserve for dividend [payable May 15, 1905].....	823,392.50
Surplus.....	3,987,101.49
Total Liabilities.....	\$85,809,212.32

[NOTE.—Haskins & Sells, public accountants, certify that on March 31 the quick assets of the United States Rubber Co. and subsidiary companies exceeded all liabilities, other than capital stock and surplus accounts, to the extent of \$11,065,096.26.]

## UNITED STATES RUBBER CO. AND SUBSIDIARY COMPANIES.

CONSOLIDATED INCOME STATEMENT FOR YEAR ENDING, MARCH 31, 1905.

Gross sales, boots and shoes and miscellaneous.....	\$57,030,904.94
Net sales, boots and shoes and miscellaneous.....	\$32,931,210.86
Cost of goods sold .....	26,110,331.97
Manufacturing profits.....	\$6,820,878.89
Freight, taxes, insurance, general and selling expenses.....	1,800,154.14
Operating profits.....	\$5,020,724.75
Other income.....	161,392.54
Total income.....	\$5,182,117.29
Less:	
Interest and commission on Funding Notes and borrowed money.....	\$1,040,932.19
Interest on Boston Rubber Shoe Co. debentures.....	240,000.00
Interest allowed customers for pre-payments.....	192,529.97
Net income to surplus.....	\$3,708,655.13
Additions to surplus.....	88,852.02
	\$3,797,507.15
Deductions for bad debts, etc. ....	35,584.52
Total Surplus.....	\$3,761,922.63
Dividends.....	1,882,040.00
Surplus for period.....	\$1,879,882.63
Surplus April 1, 1904.....	2,107,218.86
Surplus March 31, 1905.....	\$3,987,101.49

JOHN J. WATSON, JR., Treasurer



ing to the greater quantities of materials and supplies which the directors have felt it prudent to carry.

**COMMODORE BENEDICT'S TRIP TO THE AMAZON.**—In consequence of the continued advancing prices in crude rubber from the beginning of the year, Commodore Benedict, in November last, organized and conducted at his own expense a trip to the Amazon in the interest and for the benefit of the company. I desire to take this opportunity to express the high appreciation felt by the directors for the generous and disinterested motives that have prompted this act, and to say that arrangements have been made by them for suitable recognition thereof by the company. We look for great benefits in the future as the result of this expedition.

I feel I should not close this report without a brief mention of a loss which the company has sustained in the death of our director, Elisha S. Converse, who, though not active upon the board of late, was such a conspicuous personality in the building up of the rubber boot and shoe industry of this country during the past fifty years, that all should accord him the first place in the inception, development, and success of that industry. We wish to record our deep sorrow at his death and reverence for his memory. Respectfully submitted,

SAMUEL P. COLT, President.

#### THE ANNUAL ELECTION.

SEVENTEEN directors were chosen, being two more than last year. Fourteen of the old board were reelected, and one vacancy existed on account of the death of the Hon. E. S. Converse. The new members are F. S. Hastings, W. H. Truesdale, and John J. Watson, Jr. Below is given a list of positions held by the various members of the board in other corporations than the United States Rubber Co. and its constituent companies, based upon the most recent information available. The number of terms for which each member of the board has been chosen is also indicated:

WALTER S. BALLOU, Providence, Rhode Island. [Third term.]

ANTHONY N. BRADY, No. 54 Wall street, New York. [Second term.]

[Director in 47 corporations, of which he is president of five, vice president of six, and chairman of the board of one (The Brooklyn Rapid Transit Co.). Of these 17 are railroad companies, 11 gas companies, 6 electric companies, 5 tobacco companies, 5 general manufacturing companies, 2 banks, 3 trust companies, and 2 air brake companies. The list includes the American Tobacco Co., the Consolidated Gas Co. of New York, the Corn Exchange Bank, New York Air Brake Co., and the Westinghouse Electric and Manufacturing Co.]

ELIAS C. BENEDICT, No. 80 Broadway, New York. [Fourth term.]

Of E. C. Benedict & Co., bankers.  
President Commercial Acetylene Co.  
Vice President Indianapolis Gas Co.  
Director General Acetylene Co., Kern Incandescent Gas Lighting Co.

SAMUEL P. COLT, Bristol, Rhode Island. [Fourteenth term.]

President Industrial Trust Co. (Providence), Rhode Island Safe Deposit Co.  
Vice President The Rhode Island Co.  
Director Providence Banking Co., Title Guarantee Co. of Rhode Island, Newport Trust Co., American Woolen Co., Narragansett Electric Lighting Co., Providence Telephone Co., Denver City Tramway Co.

HARRY E. CONVERSE, Boston, Massachusetts. [Eighth term.]

COSTELLO C. CONVERSE, Boston, Massachusetts. [Fifth term.]

JAMES B. FORD, No. 42 Broadway, New York. [Fourteenth term.]

Director The Atlantic Coast Steamship Co., Nashawannuck Manufacturing Co., National Lighterage Co., The New York Mutual G. S. Light Co.  
Trustee American Bank Note Co.

J. HOWARD FORD, No. 42 Broadway, New York. [Fourteenth term.]

FRANK S. HASTINGS, No. 80 Broadway, New York. [First term.]

President General Acetylene Co., Indianapolis Gas Co., Johnson-Lundell Electric Co.  
Vice President Indiana National Gas and Oil Co., Marine Engine and Machine Co.  
Treasurer Commercial Acetylene Co.  
Director Kern Incandescent Gas Light Co., Flint & Co.

FRANCIS L. HINE, No. 2 Wall street, New York. [Third term.]

President Nashawannuck Manufacturing Co.  
Vice President First National Bank of the City of New York. Review of Reviews  
Treasurer East Jersey Water Co.  
Trustee American Bank Note Co., Brooklyn Trust Co.  
Director American Cotton Oil Co., and 7 banks and railway, insurance, and manufacturing corporations.

HENRY L. HOTCHKISS, New Haven, Connecticut. [Fourteenth term.]

LESTER LELAND, Boston, Massachusetts. [Seventh term.]

Director Adams Trust Co., Atlantic Coast Lumber Corporation, Georgetown and Western Railroad Co., Industrial Mutual Insurance Co., Shoe Hardware Co., State National Bank (Boston).

FREDERICK M. SHEPARD, No. 787 Broadway, New York. [Fourteenth term.]

President Goodyear Rubber Co., Rubber Clothing Co., Union India Rubber Co., Orange Water Co., East Orange Safe Deposit and Trust Co.  
Director The Mutual Benefit Life Insurance Co.

FRANCIS LYNDE STETSON, No. 15 Broad street, New York. [Fourth term.]

Of Stetson, Jennings & Russell, lawyers.

First Vice President Cataract Construction Co.

Director Alabama Great Southern Railroad Co., Alabama Great Southern Railroad Co., Limited; Chicago and Erie Railroad Co., Cincinnati, New Orleans, and Texas Pacific Railway; Crosstown Street Railway of Buffalo, Erie Railroad Co., International Railway Co. (Buffalo), International Traction Co. (Buffalo), New York, Susquehanna, and Western Railroad Co., Niagara Development Co., The Niagara Falls Power Co., Niagara Junction Railway, South Carolina and Georgia Railway Co., United States Express Co.

WILLIAM H. TRUESDALE, No. 26 Exchange place, New York. [First term.]

[President of 14 railway companies (including the Delaware, Lackawanna and Western), vice president of 2, and a director in 3 others—a total of 19. Also:]  
Director Lackawanna Valley Coal Co., Temple Iron Co.  
Trustee Mutual Life Insurance Co. of New York.

JOHN D. VERMUELE, No. 503 Broadway, New York. [Ninth term.]

President York Cliffs Improvement Co., York Water Co.  
Director Brigantine Co., Chatham National Bank, Empire State Realty Co., Philadelphia and Brigantine Railroad Co.

JOHN J. WATSON, JR., No. 42 Broadway, New York. [First term.]

Director Shoe Hardware Co.

The newly elected board met in New York on May 19, and, after organizing, reelected the following officers and executive committee for the ensuing year:

*President*—SAMUEL P. COLT.

*First Vice President*—JAMES B. FORD.

*Second Vice President*—LESTER LELAND.

*Treasurer*—JOHN J. WATSON, JR.

*Assistant Treasurer*—W. G. PARSONS.

*Secretary*—SAMUEL NORRIS.

*Assistant Secretary*—JOHN D. CARBERRY.

The Executive Committee consists of Samuel P. Colt, James B. Ford, Lester Leland, E. C. Benedict, Walter S. Ballou, and Anthony N. Brady.

#### WHERE GOODYEAR WORKED IN WOBURN.

THE exact location of the factory in which Charles Goodyear worked in Woburn, Massachusetts, seems for some time to have been shrouded in doubt, but a recent investigation of land titles settled the mooted question, and the Rumford Historical Society has taken up the question of marking the site with a memorial tablet or stone.

The factory was that of the Eagle India Rubber Co., formed about 1834 to make rubber cloth, but which, after many discouragements, sold out to Hayward & Humphrey in the fall of 1837. After a few months the business was carried on by Nathaniel Hayward alone, and on September 17, 1838, he sold out to Charles Goodyear, for whom he had agreed to work one year for \$800. From the expiration of the year Hayward carried on the business himself, but on April 3, 1841, he again sold out to Goodyear, who meanwhile had been in no regular business, and worked for him until April, 1842, when Hayward for the third time took charge of the business, which he continued until the summer of 1843. These details are contained in the Hayward pamphlet reprinted in THE INDIA RUBBER WORLD, September 10, 1890 [page 291]. Hayward and Goodyear did much experimenting in this factory and there were at times questions as to the credit due for the results attained. Mr. Goodyear wrote in his book [Vol. I—page 68]:

"This change wrought in gum-elastic by sulphurous gas and a high degree of heat was first made by the writer in the town of Woburn, about ten miles from the city of Boston, Mass., in the winter of 1838 and 1839, under circumstances of such a nature, that there could be no mistaking the facts in the case, or blending the results of the writer's labors with those of any other individual. The circumstances of the inventor prevented public notoriety of the discovery of 1839 as soon after it was made as that would have been desirable."

## THE MERGER OF THE RUBBER COMPANIES.

**A**T a meeting of the directors of the United States Rubber Co., in New York, on May 12, the executive committee made a report in favor of the acquisition by the company of not less than two-thirds of the capital stock of the Rubber Goods Manufacturing Co., the means for such purchase being an increase of the capital stock of the United States Rubber Co. There was also presented a form of contract, bearing the same date, by and between the United States Rubber Co. and Anthony N. Brady, acting in behalf of a syndicate stated to be in a position to secure control of the capital stock of the Rubber Goods company on certain terms.

Whereupon, after discussion, the directors of the United States Rubber Co. adopted resolutions that it would be desirable to have their articles of incorporation amended so as to increase their issue of preferred capital shares by \$15,000,000, and to create one more class of stock—a second preferred 6 per cent. cumulative stock—to the amount of \$10,000,000, with a view to the exchange of shares on the following basis:

\$9,051,400 in first preferred stock of the United States Rubber Co., at par, and \$10,000,000 in new second preferred stock of the United States Rubber Co., at par, for all the shares of preferred stock of the Rubber Goods Manufacturing Company, and for all the shares of the common stock of the Rubber Goods Manufacturing Co.—subject in each case to a suitable deduction in the event that less than all the shares be acquired.

It was resolved to enter into the conditional contract with the Brady syndicate and to call a special meeting of shareholders of the United States Rubber Co. to be held in New Brunswick, New Jersey, on May 25, to take action upon the resolutions adopted by the board, and to authorize and approve the acquisition of stock of the Rubber Goods Manufacturing Co.

Following the meeting in question, a circular was issued to the shareholders of the United States company, the text of which is given herewith in full, and which serves to set forth all the conditions and the proposed means for bringing about the merger:

## UNITED STATES RUBBER COMPANY.

MAY 12, 1905.

TO THE STOCKHOLDERS OF THE UNITED STATES RUBBER COMPANY:

The original certificate of incorporation of the United States Rubber Company stated, as one of the objects of the corporation:

"The purchasing the stock of any company or companies owning, mining, manufacturing, or producing materials or other property necessary for its business, or of any other company whose shares it may lawfully purchase, and exercising with relation thereto, all the rights, powers, and privileges of individual owners of the shares of such stock."

In pursuance of its corporate powers, and in consummation of its corporate purposes as thus declared, the United States Rubber Company has acquired and now holds the stock of many other companies. Among such stocks during several years, the United States Rubber Company (or one of its subsidiary companies) held shares of the Rubber Goods Manufacturing Company. Preëminently and conspicuously that is a company whose stock the United States Rubber Company might and may lawfully purchase, for in the rubber industry it is the most important manufacturer of rubber goods, not including boots and shoes, whose business naturally would complete and would supplement the business of the subsidiary companies of the United States Rubber Company, which are engaged almost exclusively in the manufacture of rubber boots and rubber shoes.

The relations between these two companies in no sense are competitive, but clearly are supplementary; and for several years have sugges-

ted to those conversant with the rubber business, and especially with the affairs of these two companies, the advantages to be gained from their closer connection. Accordingly, for some time the business and results of the business of each company, and the possibility by union of improving and extending the business of each, have engaged the attention of the management of the United States Rubber Company, which deems that now the time has come for effecting such union, if the same can be accomplished substantially in the method and upon the terms hereinafter set forth.

Investigation into the affairs of the Rubber Goods Manufacturing Company has satisfied the management that its business is in a prosperous condition as regards both stability and profits, the net earnings for the last fiscal year having exceeded \$1,500,000, thus providing for the preferred stock the full 7 per cent. dividend and for the common stock a substantial sum, although not paid out in dividends; that it is reasonably certain that, if operated in connection with the business of the United States Rubber Company, its holdings in the Rubber Goods Manufacturing Company would result to the United States Rubber Company in annual net returns not less, and probably more than the sum of \$2,000,000, with every prospect of increase of business in volume and profit to each company; that such earnings would exceed the amount required to pay the dividends upon the increased amount of the first preferred stock, and upon the (new) second preferred stock of the United States Rubber Company (hereinafter proposed), were the same to be issued in exchange for stock of the Rubber Goods Manufacturing Company, provided that not less than two-thirds thereof be acquired; and that it would be reasonable to anticipate an important extension of the business of the United States Rubber Company through channels opened by the Rubber Goods Manufacturing Company.

For the accomplishment of the result thus regarded as desirable, several methods have been considered, but none has seemed as feasible as the purchase of the stock of the Rubber Goods Manufacturing Company, which purchase, under the express terms of the original certificate of incorporation of the United States Rubber Company, is authorized to be made in its discretion, by the board of directors, without referring the question to a stockholders' meeting.

The means of making payment for the stock so purchased also have been carefully considered. At the outset it was thought that such purchase might be accomplished by an issue of collateral trust notes, secured by a pledge of the shares of stock of the Rubber Goods Manufacturing Company acquired by the use of such notes; and rather than forego the purchase and the advantages to result therefrom to the United States Rubber Company, if no better means were provided, it might still be advisable to make such purchase by the use of such collateral trust notes. But it occurred to the management that rather than subject their stock to the prior fixed charges of such collateral trust notes, the United States Rubber Company stockholders might prefer to provide the means of purchase by an increased issue of stock, especially if the stock issues were to be adjusted so as not only to give assurance of stability of value to the preferred stock, but also to hold out reasonable expectations of increase of value in the common stock of the United States Rubber Company. Both of these purposes, it is believed, would be attained were the very moderate amount of the preferred stock and all of the common stock of the Rubber Goods Manufacturing Company to be acquired by an issue of new first preferred stock of the United States Rubber Company in amount equal to that of the Rubber Goods Manufacturing Company, and an issue of a new 6 per cent. second preferred stock of the United States Rubber Company, preferred only as to dividends (and not as to principal) over the common stock, which thus would get the benefit of the entire residue of earnings after providing for the preferred dividends, which would be limited respectively to 8 per cent. and to 6 per cent. annually. For the total amount of the common stock of the Rubber Goods Manufacturing Company, there would thus be issuable not more than 60 per cent. of the par thereof in the



(new) second preferred stock (at par) of the United States Rubber Company.

The reports of the Rubber Goods Manufacturing Company, and an investigation into its business, have satisfied the management that if all of the stock of the Rubber Goods Manufacturing Company were obtained on these terms the first preferred stock of the United States Rubber Company would be substantially assured of regularity and stability of 8 per cent. dividends; that the second preferred stock would have every reasonable expectation of a regular 6 per cent dividend; and that full dividends would be earned and without great delay might reasonably be paid upon the common stock of the United States Rubber Company. These advantages to the stockholders of the United States Rubber Company would be gained without sacrifice of any right, but rather with a corresponding advantage to the interests of the stockholders of the Rubber Goods Manufacturing Company; for the 7 per cent. first preferred stock of that company would be exchanged for an 8 per cent. preferred stock, and the common stock of that company upon which for some time no dividends have been paid would (though to a lesser amount) become a preferred stock with reasonable assurance of 6 per cent. dividends. The case seems to be one in which each of the two parties would derive just and proportionate gain from the transaction.

But, in addressing the stockholders of the United States Rubber Company, the directors are concerned particularly and primarily with the separate interests of the stockholders of their own company. As to these, the opinion of the directors present at the meeting authorizing this circular is emphatic and unanimous that all might anticipate advantage in the acquisition of the stock of the Rubber Goods Manufacturing Company upon the terms above stated: and by an issue of stock of the United States Rubber Company, rather than by an issue of collateral trust notes. This latter method is held in abeyance until after the stockholders shall have decided whether or not to amend the certificate of incorporation, and to increase the stock and to create a new class of preferred stock.

Of course, in view of the various contingencies of the situation, including the risk of fluctuations in market value, and the possibilities of "corners," it must be obvious that it would not be prudent for the board of directors to enter upon a series of purchases in the open market, without any certainty as to how far such purchases might be effected. It was not and is not for the interest of the United States Rubber Company to undertake purchases of any of the stock of the Rubber Goods Manufacturing Company unless it can be certain of acquiring not less than two thirds of all of such stock. Accordingly, it has seemed to the management reasonable and proper to determine first what would be the fair value to the United States Rubber Company for its corporate purposes of all of the capital stock of the Rubber Goods Manufacturing Company, and, after having determined such value, to agree to pay the same or a lesser amount to a Syndicate if it would procure and would sell and deliver to the United States Rubber Company, within the indicated price, all of the stock of the Rubber Goods Manufacturing Company, or not less than two-thirds thereof—a ratable deduction from the aggregate price being made for and on account of all shares of the preferred stock or of the common stock of the Rubber Goods Manufacturing Company not delivered by the Syndicate, provided that not less than two-thirds of all the stock should be delivered. This Syndicate would bear all the expenses of the transaction, and would find its profit in the difference between the price by it paid for the stocks of the Rubber Goods Manufacturing Company and the price by it received therefor from the United States Rubber Company in its stocks as above proposed.

Such a Syndicate naturally would be formed only by those familiar with the business in question; and, therefore, the one that has been formed includes directors of the United States Rubber Company acting on their own account. It is stated that the Syndicate includes also the president of the Rubber Goods Manufacturing Company, acting in his own personal capacity and upon his own account, and in no sense as an officer or representative of that company.

Directors of the United States Rubber Company, having no interest in the Syndicate, constituting a quorum, have adopted resolutions for the increase of the capital stock of the corporation, for the creation of a second preferred stock, and for the amendment of the certificate of in-

corporation, to the extent deemed necessary for the accomplishment of the purchase of the stock of the Rubber Goods Manufacturing Company, which purchase the directors have voted also to be desirable. The directors also have authorized the execution of a conditional contract with the Syndicate authorizing it to sell and to deliver to the United States Rubber Company not less than two-thirds of the stock of the Rubber Goods Manufacturing Company upon the terms of said contract, which has been executed and delivered, and which (with the resolutions before referred to) may be obtained by any stockholder from Samuel Norris, secretary, or at the New York office of the United States Rubber Company, 42 Broadway, New York. The contract is not finally to become or to be operative until after approval by the stockholders in special meeting assembled.

Accordingly, the directors have caused to be called a special meeting of the stockholders, to be held at the principal office of the United States Rubber Company in the city of New Brunswick, New Jersey, at 12 30 o'clock P. M., on Thursday, the 25th day of May, 1905, for the purpose of taking action upon all the matters mentioned in this circular or in the notice mailed to every stockholder.

If you approve the proposed plan and cannot be present at the special meeting, you may execute the enclosed proxy and return the same promptly in the accompanying envelope.

By the order of the Board of Directors,

JAMES B. FORD, Vice President.  
SAMUEL NORRIS, Secretary

It is of interest to note that in the proceedings of the directors' meeting above referred to, the preferred share capital outstanding of the Rubber Goods Manufacturing Co. was stated at \$9,051,400, which is larger by \$1,000,000 than the figures appearing in the annual report of the Rubber Goods company of March 31 last. The explanation is found in the recent issue of an additional \$1,000,000 in preferred shares of the Rubber Goods company for the purpose of acquiring 25 per cent. of the capital stock of the old corporation, Morgan & Wright (Chicago), the Rubber Goods company having in the past held only 75 per cent. of the Morgan & Wright shares. The amount of common stock of the Rubber Goods company is \$16,941,700, and the amount of second preferred stock of the United States company proposed to be issued for this is \$10,000,000 or about 60 per cent. of the par value of the Rubber Goods common.

#### THE MERGER RATIFIED.

At a meeting of shareholders of the United States Rubber Co. at New Brunswick, on May 25, presided over by James B. Ford, first vice president, there were represented 185,000 shares of preferred and 190,000 shares of common stock, being practically 80 per cent. of the entire capital of the company. The meeting voted to ratify the action of the board on May 12 and to approve the conditional contract between the company and Anthony N. Brady and his associates, and adopt certain resolutions to increase the capital stock of the company and to secure an amendment of the charter of the company under the New Jersey law, and to authorize and approve the acquisition of stock of the Rubber Goods Manufacturing Co. upon the terms and in the manner proposed.

#### NO CHANGE IN RUBBER GOODS MANAGEMENT.

FOLLOWING the first public intelligence of the rubber merger, the president of the Rubber Goods Manufacturing Co. issued the following notice:

NEW YORK, May 17, 1905.

Mr. E. J. COUGHLIN, General Supervisor of Factories:

The merger of Rubber Goods and United States Rubber will in no way affect the management of your companies, or any individual in them, other than to give them greater opportunities.

The management will be continued under my administration in future, as in the past. Notify all concerned.

This is sent you owing to newspaper reports.

C. H. DALE,  
President Rubber Goods Manufacturing Co.

## ANTHONY N. BRADY, ORGANIZER.

THE head of the syndicate which has been formed in connection with the merger of the Rubber Goods Manufacturing Co. with the United States Rubber Co. is regarded in New York as one of the most remarkably successful financiers of this generation. Wall street did not know of the existence of Anthony N. Brady before 1891, when he secured a contract for equipping a suburban "trolley" line with rails of a new pattern. Since then, however, the manipulators and speculators of that money center have been obliged to deal with Mr. Brady on very many occasions. The rapidity of his rise to power in the world of finance has been the wonder of "the Street." Apparently everything he touched has prospered. Railroads, gas, electric light, and power companies, banks and industrial enterprises are the units with which he deals. Cool and careful, but bold, aggressive, and daring, there is in all Wall street no personality more interesting.

Mr. Brady was born August 22, 1843, in Lille, France, whither his parents had fled from Ireland to escape political persecution. Soon afterward they removed to America, settling at Troy, New York, where the son attended school until his thirteenth year, when he was obliged to help support the family. Beginning as cashier in the barber shop of the Delevan House at Albany he was promoted from one position to another until he became head bartender. The Delevan House being a favorite resort of local and state politicians the ambitious young Brady improved the opportunity to make the acquaintance of many men who might be able later to give him valuable aid in business. He had no intention of spending his life in serving drinks to thirsty politicians, but he awaited the right opportunity for a change.

At the age of 21 Mr. Brady had saved enough money to open a tea store in Albany, which proved so successful that he was able soon to open a chain of tea stores in Albany, Troy, and other neighboring towns which proved very profitable. He next became a contractor. The streets of Albany were in a wretched condition, and the authorities decided to repave them with granite, and build new sewers. When the time came to buy the granite all the quarries within convenient distance of Albany were found to be under Mr. Brady's control. The boldness of this business stroke did not fail to impress several financiers of prominence, and when he sought the aid of such men as Roswell P. Flower, E. C. Benedict, and Edward Murphy to form a syndicate to consolidate the gas companies of Albany they readily lent their aid, and Mr. Brady was made president of the new company. He knew nothing about the gas business at the time, but was not long in mastering its details, and by introducing new methods of manufacture the enterprise soon was paying large dividends. Next turning his attention to the horse car lines of Albany and Troy, Mr. Brady secured control of them and equipped them with electricity, with such results that he was soon a millionaire. It was inevitable that the services of a man able to achieve such financial success in a small city like Albany would be in demand in larger centers, and he was induced to go to Chicago where he successfully reorganized and consolidated the gas companies.

In 1891 Mr. Brady proceeded to New York and secured a

contract for equipping a street railway in the Bronx with new rails. When the work was finished he was unable to collect the money due him, and so took over the road, organizing, to operate it, the Union Railway Co., now leased to the Metropolitan Street Railway Co., which Mr. Brady assisted to organize, with a capitalization of \$30,000,000.

Soon after Mr. Brady's debut as a contractor in New York city his attention was directed to the electric light and power field. He saw that the many elevator apartments and tall office buildings would become great consumers of electricity and that the situation presented an unusual opportunity for the investment of capital. With the aid of the Central Trust Co., the Olcotts, John A. McCall, and other powerful financiers, he organized a number of electric light and power companies and put them in operation. About this time Mr. Brady made the acquaintance of Thomas Ryan and the late William C. Whitney, with whose coöperation he acquired the Edison Co., capitalized at \$25,000,000. He then negotiated to purchase of the other companies in the same field on Manhattan island, and organized the New York Gas and Electric Light Heat and Power Co. This in turn was taken over by the Consolidated

Gas Co., with \$80,000,000 capital, and Messrs. Brady, Whitney, and Ryan were elected trustees of the latter company and made members of the executive committee.

In 1894, when the late Roswell P. Flower planned to secure control of the Brooklyn surface railways and invited Mr. Brady to become interested, the latter entered upon the work with great enthusiasm and soon had secured control of 250 miles of road and organized the Brooklyn Rapid Transit Co., with a capital of \$20,000,000. Mr. Brady was made chairman of the executive board and in that capacity has had much to do with getting the mixed affairs of the roads into shape and making a productive property of the whole. He is connected with other important enterprises involving great public improvements, too numerous to be enumerated in these pages.



ANTHONY N. BRADY.

In personal appearance Mr. Brady is a well built man, slightly below medium height; his hair is gray and his face round and full; his voice is low and musical, and his laugh hearty and contagious. He is quiet in manner and never seems in a hurry, although he can do twice the average man's work. His face and figure indicate the possession of an abundance of vitality. His mind is intensely active and he gets at the bottom of things quickly and accurately. He is strong in his likes and dislikes, and he is thought a firm friend and a bitter enemy; he never forgets a favor and will go far to repay one.

Recently Mr. Brady purchased the Bryan Lee Winters residence, at Fifth avenue and Eightieth street, New York, for \$270,000, with a view to making his home in this city. His wife was Miss Marcia A. Myers, the daughter of a Vermont lawyer. They have two sons and four daughters. Their residence hitherto has been at Albany, where their home life has been regarded as ideal. Mr. Brady cares little for society, and has always taken an active interest in politics, though he has never held a public office and has declared that he never will.

It has been remarked that probably no other man in the financial world was so well fitted as Mr. Brady to bring about the merger of the two rubber companies.



## RUBBER AT THE RAILWAY EXHIBITION.

THE exhibition of railway appliances held in Washington during the first half of May, in connection with the meeting of the International Railway Congress, has been widely commended as the finest collection of the sort that has ever been brought together in the United States. It includes the showing made at the St. Louis exhibition, with the exception of such heavy items, for instance, as the locomotive testing plant of the Pennsylvania railroad. The exhibition was in perfect order by May 3, the date of the opening, and the total cost must have been very large. The result was most satisfactory, and however important the meeting of the railway congress may have been from other standpoints, the fact remains that the exposition was the feature of the congress that attracted public attention, and that without it this assemblage of the railway notables of the world would have made a far less tangible impression.

The exposition is of significance as showing that a closer relationship has been established between the supply men and the railroads to whose necessities they cater. Another point of interest is that this being an international congress, with many visitors from abroad, an important illustration has been given of the completeness of the American market for the lines of goods which enter into railway construction and equipment.

The exhibition, with its scores and scores of important displays, has been of interest from many viewpoints—for instance, on account of the prominence of electricity in connection with steam railway transportation. Space can be given in these columns only to the exhibits made by rubber manufacturers, and by the manufacturers of other appliances or supplies with which the rubber trade is more or less interested. In addition to the companies named below the leading air brake manufacturers were all represented:

## EXHIBITS OF RUBBER MANUFACTURERS.

The Diamond Rubber Co. (Akron, Ohio).—Sheet rubber for gaskets, plain and wire bound rubber hose, packings, mats, and a general line of mechanical rubber goods.

The Hartford Rubber Works Co. (Hartford, Connecticut).—A large line of air, steam, and water hose; packings; plain and perforated matting; also a full exhibit of the raw material in the different stages of manufacture.

Home Rubber Co. (Trenton, New Jersey).—Air brake and steam hose; also a sample case showing a full line of mechanical rubber goods.

Mechanical Rubber Co. (Chicago).—Full line of rubber goods for railroad use, including air brake hose, locomotive and fender couplings, gaskets, corrugated U shaped steam hose, and rubber fire hose nozzles.

Mechanical Rubber Co. (Cleveland, Ohio).—Air brake, steam, and water hose; gaskets, rubber mats and matting, and drug sundries of rubber.

New York Belting and Packing Co., Limited (New York).—Interlocking rubber tiling, car heating and air brake hose, gaskets, belting, packing, etc.

Peerless Rubber Manufacturing Co. (New York).—"Peerless" steam hose, engine, and tender hose connections; "Rainbow" sheet packing, and a general line of mechanical rubber goods for railroads.

## MORE OR LESS ALLIED GOODS.

Chicago Pneumatic Tool Co. (Chicago).—Pneumatic tools and appliances.

Garlock Packing Co. (Palmyra, New York).—Packings.

Ingersoll-Sergeant Drill Co. (New York).—Pneumatic drills and tools and appliances.

H. W. Johns-Manville Co. (New York).—Asbestos packing; Vulcanite goods.

Rand Drill Co. (New York).—Pneumatic drills and tools and appliances.

Robins Conveying Belt Co. (New York).—Three rubber belt conveyors for handling coal.

Sprague Electric Co. (New York).—Flexible steel armored hose for compressed air or steam. [The Sprague hose was also shown in the exhibit of the General Electric Co.]

Standard Paint Co. (New York).—"Rubberoid" roofing; "P. and B." insulation paint.

Vacuum Cleaner Co. (New York).—Vacuum cleaning apparatus in operation.

G. S. Wood (Chicago).—"P. and W." rubber preservative for hose also air brake, steam, and fire hose.

## RUBBER GOODS FOR THE POSTAL SERVICE.

PROPOSALS have been received as usual at Washington for supplies for the postoffice department and the postal service for the fiscal year beginning July 1. The specifications include the same quantity of rubber bands (6800 pounds) as last year, but less than in some former years. There are also various items—not large in the aggregate—of typewriter and other rubber erasers, penholders "with cork or rubber tips," and so on.

The requirements for rubber stamps are large and varied, embracing a total of 51,685, under 44 headings, of sizes up to 3×6 inches; in forms square, circular, triangular, and oval; with and without border line; with and without air cushions; self inking and otherwise; with from one to seven lines of type; in some cases containing only a single date, as "1905"; facsimiles of signatures, and so on. Besides, 1000 sets of rubber type are called for, in addition to 10,625 separate items of rubber type. A total of 27,600 rubber inking pads are mentioned, and 7440 two ounce bottles of ink for such pads, in addition to 2500 pounds of ink. Of "flexible stamps of printers' roller composition," only 6000 are called for, against 7000 last year, and 10,000 during each of the two preceding years, prior to which none had been mentioned. In relation to the "printers' roller composition" the specification reads:

The stamp to consist of a composition of glue, glycerin, and borax; the glue capable of absorbing not less than 10 parts by weight of water to 1 part of glue when allowed to stand in contact with water for 24 hours at a temperature of 20° C.; glycerin to be chemically pure and having a specific gravity of not less than 1.2550 at 15½° C.; these ingredients to be in the following proportions: 55 pounds of glue, 45 pounds of glycerin, and 1 pound of powdered borax, thoroughly boiled, and must not gain in weight by absorption of water or steam more than 5 per cent.

It would appear that rubber "postmarking and cancelling stamps" are to be required for the first time, these including the name of the postoffice and state, and containing a space to receive the date, and mounted on an air cushion base, of which 11,000 are required, in addition to the usual number of rubber "dating stamps" for use in the money order and registered letter services. Metal postmarking and cancelling stamps continue, however, to be required in large numbers.

RUBBER BOOTS AND SAUERKRAUT.—Writing of the sauerkraut industry at Clyde, Ohio, which is said to be larger than in any other town in the world, a newspaper correspondent describes one feature of the manufacture as the "stamping" process. After the cabbage heads have been sliced by machines into "slaw," and salt has been added, the mass is thrown into vats of 100 barrel capacity, to be "stamped." The correspondent says: "The stamping is done by a force of men who wear rubber boots made especially for this purpose." It is encouraging to read farther that "great care is taken to have everything clean in connection with each operation."

## RUBBER INTERESTS IN EUROPE.

## MERGER OF TWO GERMAN COMPANIES.

THE Vereinigte Berlin-Frankfurter Gummiwaaren-Fabrik, owing to their Berlin premises (Mühlenstrasse 70-71) having become too restricted for their growing business, have taken over as a whole the factory and business of Aktien-gesellschaft für Fabrikation technischer Gummiwaaren C. Schwanitz & Co., in the same city. For the 650,000 marks general capital of the Schwanitz company an equal amount in new shares of the Berlin-Frankfurter company, entitled to a dividend for the present year, has been issued, and for 180,000 marks preferred shares an equal sum in  $4\frac{1}{2}$  per cent. bonds have been issued by the Berlin-Frankfurter company and 18,000 marks paid in cash. The capital of the Berlin-Frankfurter has been increased by 1,050,000 marks, making a total of 2,850,000 marks, by the issue of new shares. Besides the 650,000 marks above mentioned, the new issue includes 400,000 marks in shares for purposes of working capital, which were taken over by the Deutsche Bank at a premium of 25 per cent., with the proviso that 360,000 marks in shares should be offered to the shareholders at a premium of 30 per cent. Messrs. Herman Rinkel and Phil. Braun, who were directors in the Schwanitz company, have joined the board of the Berlin-Frankfurter. The Schwanitz company dates from 1874 and has had a profitable career. The Berlin-Frankfurter corporation dates from 1883, though their Berlin works are among the oldest in Germany. A second factory, at Gelnhausen, near Frankfurt o/M., was acquired in 1886, and a third, at Grottau (Bohemia), was built later.

## THE CALLENDER COMPANIES IN ENGLAND.

GEORGE M. CALLENDER & CO., LIMITED (London), have issued an additional £25,000 in preference shares, bringing their capital to £100,000, one half in 6 per cent. cumulative preference shares, and one half ordinary. The company was formed in 1903 to succeed the firm George M. Callender & Co. in supplying the Callender bitumen specialties—sheeting, "damp course," and damp resisting solution—for architectural and engineering work, and to erect a factory for making these materials, which formerly had been manufactured by Callender's Cable and Construction Co., Limited. The bitumen is still obtained from the latter company. The increase of capital of George M. Callender & Co., Limited, is to enable them to become interested in companies lately formed to manufacture the Callender specialties in Italy and in Egypt, respectively. Callender's Cable and Construction Co., Limited, date from 1895. Their capital is £200,000 preference and £175,000 ordinary shares, and £300,000 in debentures, all of which issues are quoted at a premium—indicating the importance of the bitumen interests with which they are concerned.

## OBITUARY.

MR. STEPHEN WILLIAM SILVER, who died on March 7, in his eighty-sixth year, had been connected for more than half a century with the business which in 1864 became the India-Rubber, Gutta-Percha and Telegraph Works Co., Limited. Previously the firm was S. W. Silver & Co., founded at Greenwich, in the waterproofing trade, to which at an early date insulation work was added. In 1852 the factory was removed to what has become an important town named Silvertown, in honor of the Silver family. Originally a director of the company, Mr. Silver became chairman of the board, and latterly has worn the title of extraordinary director. In addition to devoting his energy for more than half a century to the affairs of this company, Mr. Silver manifested a close interest in colonial affairs,

and was a fellow of the Royal Geographical Society and an active member of the Linnean Society, the Royal Botanic Society, and others of a kindred nature.

=Mr. John Bailey died in London on March 30, in his seventy-fifth year. At the age of 18 he entered the employ of Messrs. S. W. Silver & Co., and in 1857 was appointed resident manager of their works at Silvertown. He remained there until 1900, when he was transferred to the company's offices in Cannon street, London, retiring in 1902. Mr. Bailey, in addition to his devotion to the progress of the factory, took a live interest in promoting the local improvements which have transformed an isolated group of buildings on the banks of the Thames into a densely populated borough.

## GREAT BRITAIN.

MR. WILLIAM FIRTH has retired from the position of secretary of the North British Rubber Co., Limited (Edinburgh), which he had filled continuously since the formation of that company, in the summer of 1857. He has outlived all the founders of the company and the original directors and officers, and practically all the original employés, in whatever capacity. He is succeeded in the office of secretary by Mr. Alexander Johnson, late manager and secretary of the Hyde Rubber Works, Limited (Woodley).

=East Kent Vacuum Cleaner Co., Limited; registered March 31. Capital £10,000; object, to adopt an agreement with H. H. and G. E. Arnold, to acquire patents and to carry on the business of carpet and general cleaners. The Southern Counties Vacuum Cleaner Co. nominate one director; H. H. Arnold is managing director. Registered office: 42, High street, Rochester, England.

=The India Rubber, Gutta Percha and Telegraph Works Co., Limited (Silvertown), have brought out two rubber covered golf balls, made under the Haskell patent, which they label "Silvertown" and "Silviator."

## GERMANY.

HERR DIRECTOR SELIGMANN of the Continental Caoutchouc- und Guttapercha-Compagnie (Hanover) has been decreed a Kommerzienrat. Herr Director Prinzhorn, of the same firm, received the Order of the Red Eagle, fourth class. These distinctions were granted for the interest evinced by both gentlemen in the matter of homesteads for workingmen.

=The St. Helens and General Rubber Co., G. m. b. H., has been established at Berlin, with 100,000 marks capital, for the sale of tires and technical rubber goods, especially those of the General Rubber Co. of England. The managers are Adolph von Wulffen and Michael Steinhardt.

=Max Baumgärtel, proprietor of the elastic webbing and hosiery factory conducted under the name Julius Römpler, at Zeulenroda, is dead. The business is being continued by Frau Martha Baumgärtel, his widow, with Anton Fritzsche, for several years in charge of the factory, and Paul Henrich, a traveling salesman, with powers of procuration.

=Alexander Cross, of Glasgow, Scotland, has severed his connection with the Continentale Pegamoid-Aktiengesellschaft, at Crefeld. Frank Gustav Gebhard, of Freiburg, has been added to the board.

=The Continental Caoutchouc- und Guttapercha-Compagnie (Hannover), in order to extend their factory premises, have decided to purchase the site of the Hannoverschen Zündholz-Compagnie (Hanover Match Co.), who will move outside the city.

=Asbest- und Gummiwerke Alfred Calmon A.-G. (Hamburg), instead of paying a 4 per cent. dividend, decided to devote their profits for last year to improvements.



## NEWS OF THE AMERICAN RUBBER TRADE.

## RUBBER GOODS MANUFACTURING CO.

THE directors, at a meeting in New York on May 19, declared the twenty-fifth regular quarterly dividend of  $1\frac{3}{4}$  per cent. on the preferred shares of the company, out of earnings, payable on June 15 to all shareholders of record on June 5. Checks will be mailed to registered addresses.

## MANUFACTURED RUBBER CO. (PHILADELPHIA).

THE annual meeting of shareholders of this company—the first since the reorganization—was held on May 10 at the registered offices in Camden, New Jersey. It was stated that the factory at Metuchen, New Jersey, had been improved during the year at a cost of \$12,000, and that mortgages on the factory amounting to \$23,000 had been bought in, leaving the plant now free of all incumbrances. The operation of the plant had shown an encouraging profit, and the output for 1905 was stated to be largely sold ahead. The directors elected are Clayton E. Platt, John S. Arndt, George G. Peterson, D. A. Cutler, J. P. Cunningham, Edward J. Dumeé, and A. S. Hardy.

## WOONSOCKET RUBBER CO.—ELECTION.

AT the annual meeting of shareholders of the Woonsocket Rubber Co., at Woonsocket, Rhode Island, on April 24, the following directors were elected: Samuel P. Colt, Walter A. Read, John W. Ellis, James Harris, Walter S. Ballou, Homer E. Sawyer, John J. Watson, Jr. The directors, after organizing, elected Colonel Samuel P. Colt president and general manager, and Charles H. Guild secretary and treasurer. There is no change in the list. —A statement of the financial condition on March 31, 1905, filed with the Massachusetts commissioner of corporations, follows:

ASSETS.		LIABILITIES.	
Real estate.....	\$ 897,543	Capital stock.....	\$3,000,000
Machinery.....	292,843	Accounts payable....	408,872
Merchandise.....	3,017,449	Special indebtedness..	1,800,000
Cash and receivables...	94,955	Fixed surplus.....	1,613,990
Adjustment of inventory..	1,198,994	Profit and loss.....	479,012
Special account receivable.....	1,800,000		
Total.....	\$7,301,784	Total.....	\$7,301,784

The item of \$1,800,000, on both sides of the above account, relates to a special account with the United States rubber. Last year the amount figured as \$2,800,000.

## NEW COMBINATION IN THE COTTON DUCK INDUSTRY.

PLANS have been formulated for the complete merger of the Mt. Vernon-Woodberry Cotton Duck Co. and the United States Cotton Duck Corporation—two companies which have been closely allied, though not always able to work together in complete harmony owing to the difficulty of distributing the orders received so as to satisfy conflicting claims. Both companies own valuable mills, located in various states, and valuable brands and trade marks. The holders of the securities of the two companies were invited to deposit the same, not later than May 29, with certain named trust companies, with a view to their exchange for shares of a new corporation, to be formed under the laws of Delaware, under the name *Consolidated Cotton Duck Co.* One result of the merger will be a substantial reduction of the capital. The new company will be capitalized at \$6,000,000 in 6 per cent. cumulative preferred shares and \$7,000,000 in common stock—a total of \$13,000,000, all in shares of \$50, par value. It is understood that there will be no syndi-

cate or other commissions, and that the trust companies named as depositaries of the securities will serve without charge. The organization of the United States Cotton Duck Corporation was reported in THE INDIA RUBBER WORLD July 1, 1901. [page 291], since which time its relations with the Mt. Vernon-Woodberry Cotton Duck Co. have been modified, and the capital issues largely reduced from the original figure.

## AMERICAN RUBBER CO.—ELECTION.

AT the annual meeting of shareholders, in Boston, on May 3, the old board was reelected as follows: Samuel Pomeroy Colt, William R. Dupee, Harry E. Converse, Lester Leland, and Costello C. Converse. At a subsequent meeting of the directors William R. Dupee was reelected president and George P. Eustis treasurer and clerk. —The following financial statement was submitted and approved:

ASSETS.	
Plant (Land, buildings, machinery, and fixtures)....	\$ 322,831.47
Cash.....	33,962.53
Bills receivable, Special .....	600,000.00
Accounts receivable (Classed good).....	876,508.62
Inventory (Conservative cost).....	1,839,684.25
Miscellaneous .....	22,000.00
Total assets.....	\$3,694,986.87
LIABILITIES.	
Capital .....	\$1,000,000.00
Bills payable.....	465,000.00
Bills payable, Special: .....	600,000.00
Accounts payable.....	11,849.42
Fixed surplus.....	865,734.01
Profit and loss.....	752,403.44
Total liabilities.....	\$3,694,986.87

## THE CANADIAN RUBBER CO. OF MONTREAL.

THIS statement is authorized by Mr. D. Lorne McGibbon, general manager of this company, that during the current year no less a sum than \$250,000 has been allocated by the directors for the purpose of not only improving the present plant in the way of additional machinery, etc., but in the erection of new factories for the manufacture of certain lines of goods handled at present in a restricted way, but for which there is believed to be a great possibility in the Dominion. It is anticipated by the management that the additions which have been planned will increase the present producing capacity by at least 50 per cent., and involve the employment of a large business force. It may be mentioned that during 1904, more than \$240,000 was spent by the management on additions and improvements to the factory. The factory was established more than 50 years ago, and additions have been made from time to time until now the various buildings cover more than 12 acres,

## AN UNUSUAL SUIT FOR DAMAGES.

A DAMAGE suit rather peculiar in its nature has been brought against The Republic Rubber Co. (Youngstown, Ohio) by Andrew X. Johnson, a railroad employé living at Two Harbors, Minnesota. Previously Johnson had sued the Duluth and Iron Range Railway Co. for \$30,000, because of personal injuries alleged to have been received while testing rubber hose in the machine shops of that company. Johnson now brings a second suit for damages, in the sum of \$6250, against the alleged manufacturers of the rubber hose, on the ground of its having less strength than was claimed for it, and of his having no means to determine this fact before undertaking the test.

## THE B. F. GOODRICH CO. RUBBER SHOE FACTORY.

WORK on the building to be occupied by their rubber footwear factory has been begun by The B. F. Goodrich Co. (Akron, Ohio). So far the work has been confined to the foundation, which is adjacent to the Ohio canal, and piling is necessary to give a solid base. The building will be of brick, 150 X 100 feet, and will comprise three stories and basement. It is expected to have the building completed early in the autumn. The location is at the northwest corner of the company's plant, on land heretofore owned by the company, but which has been occupied by the Erie railroad for switching purposes. On account of the occupancy of the land by the Goodrich company the Erie purchased the lower basin of the canal from the state of Ohio and intends constructing additional tracks and increasing the shipping facilities of the Goodrich company and adjoining rubber and other plants to a large extent. The Goodrich company have also purchased from the state a tract of land adjoining their plant, that it may be prepared for any future need for larger premises.

## NEW YORK STOCK EXCHANGE TRANSACTIONS.

## UNITED States Rubber Co.:

DATES.	COMMON.			PREFERRED.		
	Sales.	High.	Low.	Sales.	High.	Low.
Week ending Apr. 20	6,500	44	41	2,900	117 $\frac{1}{2}$	115 $\frac{3}{4}$
Week ending Apr. 29	12,300	42	36 $\frac{1}{2}$	5,500	116 $\frac{7}{8}$	102
Week ending May 6	7,210	39 $\frac{5}{8}$	35 $\frac{1}{2}$	9,945	111	104
Week ending May 13	9,210	42 $\frac{1}{2}$	37	3,450	110 $\frac{1}{8}$	108
Week ending May 20	6,400	42 $\frac{1}{4}$	37 $\frac{1}{4}$	1,898	110	105 $\frac{1}{4}$

## RUBBER Goods Manufacturing Co.:

DATES.	COMMON.			PREFERRED.		
	Sales.	High.	Low.	Sales.	High.	Low.
Week ending Apr. 20	17,900	33 $\frac{1}{2}$	31	655	107 $\frac{1}{2}$	106 $\frac{1}{2}$
Week ending Apr. 29	25,420	33 $\frac{3}{8}$	29 $\frac{1}{2}$	4,300	107 $\frac{3}{8}$	105
Week ending May 6	27,225	33 $\frac{1}{2}$	29	1,100	105 $\frac{1}{2}$	102 $\frac{1}{2}$
Week ending May 13	49,300	37 $\frac{7}{8}$	33	1,200	108 $\frac{1}{4}$	104 $\frac{1}{4}$
Week ending May 20	25,250	3 $\frac{5}{8}$	34 $\frac{1}{2}$	2,050	109	104 $\frac{1}{2}$

## RUBBER SHOES FOR THE INDIANS.

PROPOSALS were opened at St. Louis on April 27 by the board of Indian commissioners of the United States, for certain supplies for the Indian service, for the fiscal year beginning July 1, 1905, to include the following items of rubber footwear. The successful bidder was the same as last year—J. Edmund Strong, whom we understand to represent the Edwards-Stanwood Shoe Co. (Chicago). The prices under which the award was made are also given:

738 pairs boots, men's, rubber, Nos. 7-11.....	\$2.31
1870 pairs overshoes, arctics, boys', Nos. 1-6.....	.75
561 pairs overshoes, arctics, misses', Nos. 11-2.....	.60
1396 pairs overshoes, arctics, women's, Nos. 3-8.....	.72
1279 pairs overshoes, arctics, men's, Nos. 7-11.....	1.00
447 pairs overshoes, rubber, boys', Nos. 1-6.....	.39
460 pairs overshoes, rubber, misses', Nos. 11-2.....	.33
1627 pairs overshoes, rubber, women's, Nos. 3-8.....	.41
229 pairs overshoes, rubber, men's, Nos. 7-11.....	.58

The total number is 8607 pairs, against 10,210 pairs called for last year.

## JOSEPH DIXON CRUCIBLE CO.

AT the annual meeting of the shareholders, at Jersey City, New Jersey, the old board, consisting of Edward F. C. Young, John A. Walker, Edward L. Young, William Murray, George T. Smith, Joseph D. Bedle, and George E. Long was unanimously reelected. The board of directors reelected the former officers, namely: Edward F. C. Young, president; John A.

Walker, vice president and treasurer; George E. Long, secretary. Judge Joseph D. Bedle was also reelected counsel. The shareholders present expressed themselves as thoroughly satisfied with the management of the company by its officers. Of the total number, 7345 shares, 7145 were represented.

## GENERAL ELECTRIC CO.'S THIRTEENTH YEAR.

THE thirteenth annual report of the General Electric Co., for the year ended January 31, must be very satisfactory to the shareholders. Of course, they are manufacturers of rubber goods to a comparatively limited degree, yet since the whole electrical industry rests to so important an extent upon the use of rubber for insulation, the operations of this company deserve to be considered in connection with the rubber industry. The annual report of the company is too extensive for space in this Journal, but the following figures may prove of some interest to manufacturers in general. Unless otherwise stated, they relate to the condition of the company on January 31, 1905:

Capital stock authorized.....	\$48,325,500.00
Capital stock outstanding.....	\$48,247,943.33
Orders received (for products of the company), 1904....	\$35,094,807.00
Amount billed (including services of experts, supply of products of other factories, etc.), 1904.....	\$39,231,328.00
Number of orders received (not including contracts), 1904.....	187,350
Floor space in factories.....	4,100,000
Number of employees in 1904.....	18,000
Book value of plants.....	\$ 7,500,000.00
Book value of securities held.....	\$14,488,269.16
Bills receivable.....	\$16,747,449.39
Expenditures on account of work in progress, end of 1904.....	\$ 2,009,805.25
Merchandise inventories.....	\$11,999,725.66
Liabilities (accounts payable, but no notes; gold debentures, etc.).....	\$ 3,475,295.54
Profits for 1904.....	\$ 6,719,545.78
Dividends paid for the year.....	\$ 3,684,384.00
Surplus.....	\$ 9,569,196.48

## SINGER SEWING MACHINE IN ENGLAND.

THE Singer Sewing Machine Co., Limited, was registered in England on April 26, with a capital of £600,000 in £10 shares, to acquire the business carried on in the United Kingdom by the Singer Manufacturing Co. The Singer Manufacturing Co. of New Jersey (United States) are the first managers, and may retain office until otherwise determined by the holders of two-thirds of the shares issued. Registered office: 42 and 43, St. Paul's churchyard, E. C., London.

## NEW INCORPORATIONS.

MORGAN & WRIGHT, April 27, 1905, under Michigan laws, to manufacture rubber goods at Detroit; capital authorized, \$1,500,000, of which \$750,000 is stated to be subscribed and \$150,000 paid in cash. Incorporators: Charles H. Dale, Larchmont, N. Y.; Charles J. Butler, Chicago; Charles A. Hunter, New Durham, N. J.; Ernest Hopkinson, East Orange, N. J.; Herbert Bowen, Detroit, Mich. This company succeeds the Illinois corporation of Morgan & Wright, formed December 1, 1893, to succeed the copartnership under the same name dating from 1884. It is one of the constituent companies of the Rubber Goods Manufacturing Co.

=Motz Clincher Tire and Rubber Co. (Akron, Ohio), April 15, 1905, under Ohio laws; capital, \$50,000. Incorporators: N. C. Stone, president of the City National Bank of Akron; E. S. Day, William Wolf, William C. Rentschler, and Charles Motz—all of Akron. Mr. Motz is a lawyer and the patentee of a new vehicle tire, which will be made, for the present at least, by the Buckeye Rubber Co. (Akron).

=Westmoreland Rubber Manufacturing Co., May 8, 1905, under Pennsylvania laws; capital, \$100,000. Incorporators: Frank A. Wilcox and George W. Schively, Jeannette, Pa.; H.



Willfred DuPuy and Herbert DuPuy, Pittsburgh; Wilmer Dunbar, Akron, Ohio. The principal office of the company is stated to be at Grapeville, Pa.

=Central Rubber Co., May 17, 1905, under Maine laws; capital, \$300,000. H. M. Heath is named as president and W. S. Lee treasurer—both of Augusta, Maine. This is understood to be the company formed to exploit the rubber reclaiming process of C. S. Heller, of Akron, Ohio, who has been active of late in trying to get the citizens of Olathe, Kansas, to offer a bonus for the location of a factory at that place. Cassius M. Gilbert, of Kansas City, Missouri, is active in the development of the company.

=Consolidated Rubber Tire Co. of Boston, May 12, 1905, under Massachusetts laws; capital, \$5000. The object is to carry on the business of the Consolidated Rubber Tire Co. (New York) in Boston and its vicinity. James A. Dodd (New York) is president and Frederick A. Seaman (Madison, N. J.) treasurer.

=The Luzerne Rubber Co., April 29, 1905, under New Jersey laws; to make hard rubber goods and mechanical rubber goods; capital, \$60,000. Incorporators: Bruce Bedford, Charles D. Wilson, and Joseph L. Bartine—all of Trenton. Bruce Bedford has been elected president, J. L. Bartine vice president, and C. Dudley Wilson secretary and treasurer. Registered agent: J. L. Bartine, No. 4 East State street, Trenton, N. J.

=Wm. F. Mayo & Co., May 3, 1905, under New York laws; capital \$5000; to carry on the business in New York city and its vicinity of Wm. F. Mayo & Co., Boston wholesalers of rubber footwear. Officers: George H. Mayo (Boston), president; William H. Mayo (Boston), secretary; James H. Kirkland (New York), treasurer and manager. Mr. Kirkland has represented the Messrs Mayo for sometime as salesman in New York city, and last summer a store was opened at No. 105 Reade street, in his charge, so as to be more convenient for the New York trade, which will now be carried on by the New York corporation. It is in a way a branch of the Boston store, and will handle goods from the Mayo stocks exclusively.

=Para Recovery Co. (Jersey City), May 20, 1905, under New Jersey laws; capital \$100,000, of which \$50,000 has been paid in. Incorporators: Louis B. Dailey, Thomas F. Barrett, and H. O. Coughlan, all of Jersey City. The object of the company is to reclaim rubber under processes of George E. Heyl-Dia.

=The Dayton Rubber Manufacturing Co., May 17, 1905, under Ohio laws; capital, \$150,000. Incorporators: J. C. Hooven, C. C. Hooven, E. P. Hooven, Charles P. Heiser (president of the Second National Bank of Dayton), and C. O. Richter. The object is to acquire and operate the factory which was erected last year by the Dayton Rubber Co. now in liquidation.

#### TRADE NEWS NOTES.

THE Home Rubber Co. (Trenton, New Jersey) have removed their Chicago branch to Nos. 54-60 South Canal street, where they have opened an office and warehouse fitted with all the modern appliances, and where a large stock of goods is carried. Mr. William J. M. Weaver is manager.

=The Manhattan Rubber Manufacturing Co. (Passaic, N. J.) supplied the equipment of conveyor belting for the new 2,000,000 bushel grain elevator of the New York Central and Hudson River railroad, at Weehawken, New Jersey, the total length of belts, of various types, being approximately 2½ miles.

=Robinson & Tallman, crude rubber merchants, have removed their offices from No. 64 Stone street to No. 140 Pearl street, New York. The firm now have a New England representative in Mr. Frederick Higginson, of Thomas F. Edmunds & Co., with headquarters at No. 70 Kilby street, Boston.

=The Fulton Rubber Type Co., (No. 544 Broadway, New York) will remove their factory to Elizabeth, New Jersey, having leased the old Eugene Munsell stove foundry in that city for a term of years. Their factory lately has been on Frankfort street, New York. This is a large concern of its class, including in its business an extensive export trade, and will give employment at Elizabeth to 75 persons.

=Henry A. Gould Co., crude rubber merchants, New York, announce that, owing to the intended demolition of the premises lately occupied by them, they have removed to No. 227 Fulton street, corner of Greenwich.

=The works of John A. Roebbling's Sons Co. (Trenton, N. J.) are referred to as drawing steel wire of a diameter of only 1-1000 of an inch. One pound of the wire will reach nearly 70 miles. The wire is made from steel, the commercial value of which, in the billet, is about \$50 a ton. The expense of drawing is so great that a ton of the finished wire would be worth more than \$80,000.

=The principal offices of the Pope Manufacturing Co., manufacturers of automobiles and bicycles, have been removed from New York to their factory, at Hartford, Connecticut. Hereafter Pope interests in New York will be cared for at the Pope garage, where Elliott Mason (who has been a Pope representative for more than 20 years) and Robert E. Fulton are in charge.

=The Editor of THE INDIA RUBBER WORLD is pleased to acknowledge the receipt of an invitation to the ninth annual picnic of the Peerless Mutual Aid Association—composed of employes of the Peerless Rubber Manufacturing Co.—to be held on June 10, at Union Hill, New Jersey. The last preceding entertainment of this successful association was reported in the March issue of this Journal (page 208).

=Notice is given of the dissolution by mutual consent of the partnership heretofore existing between Henry P. Rindskopf and Abraham T. Rindskopf, under the style of Rindskopf Brothers, No. 397 Sumner avenue, Brooklyn, New York. The business will be continued by Henry P. Rindskopf. The business is the manufacture of rubber goods marketed under the names Brooklyn Rubber Co., Brooklyn Hard Rubber Co., and Brooklyn Shield Co.

=Mr. J. Del Grego, foreman since 1890 of the cutting department of the Banner Rubber Co. (St. Louis), on resigning recently to become connected with another business, was presented by the employes of his department with a handsome gold headed cane.

=The Des Moines Rubber Co., rubber shoe jobbers of Des Moines, Iowa, at the annual meeting on April 18, voted to amend the bylaws to provide that, beginning in 1906, the shareholders should meet on Wednesday after the first Tuesday in April of each year. Mr. A. B. George is president of the company.

=The Akron Dental Rubber Co. (Akron) have filed with the secretary of state of Ohio a certificate of reduction of capital from \$125,000 to \$25,000.

=Mr. George W. Richardson, of the Richardson & Erlin Co. (San Francisco), representatives on the Pacific coast of the Hardman Rubber Co. (Belleville, N. J.), was a recent visitor to the East, favoring THE INDIA RUBBER WORLD offices with a call.

=Indianapolis Rubber Co. (Indianapolis, Indiana) advise THE INDIA RUBBER WORLD that the fire on their premises on the night of May 12 was confined to a small building in the rear of their factory, used for storing rubber scrap. The fire was discovered by some of their employes who were at work near by, and extinguished without difficulty, with a loss not to exceed \$1000.

=The Banner Rubber Co. (St. Louis) have been making some extensive changes in and additions to their factory, involving the installation of new machinery purchased by Superintendent Ernest C. Clark on a recent visit to the East.

=Mr. Eben H. Paine, manager of sales of the United States Rubber Co., sailed for Europe on May 19. He is to be gone about six weeks, visiting Great Britain, France, and Germany in the interest of his company.

=The treasury department at Washington announces that on the exportation of imported rubber tires known as the "Continental" tires, imported by the Continental Caoutchouc Co. (New York), to which valves of domestic manufacture have been fitted by said company in accordance with their sworn statement, dated April 5, 1905, a drawback will be allowed equal in amount to the duty paid on the imported tires, less the legal deduction of 1 per cent.

=Application for articles of incorporation have been filed by the St. Louis Rubber and Leather Belting Co., to have \$3,000 capital, full paid. Incorporators: Harry W. Huthsing 28 shares; Ford W. Thompson and Amelia E. Leusser one share each.

=B. G. Volger Rubber Stamp Ink Pad Co. have completed their new mill at Passaic, New Jersey, and removed the machinery from the old to the new building.

=The Falcon Rubber Co. (New Haven), incorporated in 1904 to manufacture rubber druggists' sundries, have filed with the secretary of state of Connecticut a certificate of increase of capital stock from \$60,000 to \$90,000.

=The rubber goods required by the bureau of engraving and printing of the Treasury department at Washington for the fiscal year beginning July 1, 1905, embrace 1000 yards of rubber cloth 45 inches wide, 400 yards 36 inches wide 24 printers' blankets 18 x 26 inches, 300 pounds rubber bands for truck wheels, and 175 pairs of rubber boots. Bids for supplying such goods were opened on March 20.

=Mr. Fred. Hall Jones, for some twenty years connected with the selling department of the Tyer Rubber Co. (Andover, Massachusetts), has been elected general manager of that company. This appointment is one that the whole trade will feel is a fitting tribute to the marked business ability that Mr. Jones has shown.

=The Vulcanized Rubber Co. have inaugurated a fire drill among the operatives of their factory at Morrisville, Pennsylvania.

=Rubber Balloon Co. of America (Newark, New Jersey) on the night of May 9 suffered a damage to their factory, by fire from an unknown cause, estimated at \$7000. The company advised THE INDIA RUBBER WORLD that they hoped to resume business on May 29. They added: "Within a few days after that date we will be operating with a larger output than immediately previous to the fire."

=Marion Insulated Wire and Rubber Co. (Marion, Indiana) are reported to have had a recent visit from two representatives of the Japanese government, who left an important order for insulated wire, to be shipped as soon as the same can be manufactured.

=A St. Louis court having, some time ago, fined W. E. Hemenover, as manager of the Banner Rubber Co. for a violation of the dense smoke ordinance, the company appealed the case on the plea that Mr. Hemenover was not "manager" but the secretary of the company. The higher court affirmed the decision, finding that Mr. Hemenover had some supervision over the company's plant, and therefore was responsible. The court said that if Hemenover was not "manager" in the meaning of the law, then all that the company would have to do to escape

responsibility would be to decline to name any person as manager.

=The members of the fire companies at College Point, Long Island, will celebrate on June 10 the fortieth anniversary of the Eagle Hook and Ladder Co., of that place. The parade will include the Exempt Volunteer Firemen's Association, who will turn out with the old "Goose-neck" engine which was the first fire apparatus to be used in College Point, by the Enterprise Hose Co., composed of employés of the old Enterprise Rubber Works. The Enterprise Rubber Works are now operated by the American Hard Rubber Co., who still own the engine referred to.

=The Suffolk Rubber Co. (Setauket, New York), incorporated in February last, advise THE INDIA RUBBER WORLD that their factory will be in operation in the early part of June and that they will make a full line of rubber footwear, including arctics and snow excluders. Franz S. Cutler, secretary and treasurer of the corporation, is in charge of the management.

=Mr. Charles H. Arnold, of the rubber importing house of Poel & Arnold (New York and Boston), sails for Europe June 2 on a business trip that will last some six weeks.

=James E. Odell, No. 186 Devonshire street, Boston, has accepted the representation for the New England states of F. R. Müller & Co., India-rubber and Gutta-percha importers and merchants, of London and Glasgow.

=The annual meeting of the shareholders of the Consolidated Rubber Tire Co. was held on May 1 at the registered offices at Jersey City, New Jersey, when the retiring board of directors was re-elected. The general offices of the company have been removed from No. 40 Wall street to No. 39 Pine street, New York.

=F. H. Appleton & Son will erect an addition 15 x 100 feet to their rubber reclaiming plant at Franklin, Massachusetts.

=Boston Woven Hose and Rubber Co. will pay a semi annual dividend of \$3 per share on their preferred stock on June 15.

=The Boston Rubber Shoe Co. have been reducing the number of boot makers in their employ, for the reason that the demand for rubber boots is not as great as formerly. Six boot makers discharged recently will be pensioned for life at \$25 per month, on account of having been in the employ of the company for 30 years or more. The others discharged recently will receive a sum of money as a gratuity, and the company will endeavor to secure new positions for them.

=George M. McCallar, of Cambridge, Massachusetts, has filed a petition in bankruptcy in the United States district court, admitting liabilities of \$20,234.70 and no assets. His liabilities consist largely of paper endorsed for the Highland Rubber Co. (Reading, Massachusetts), in liquidation, and to a small amount of paper endorsed for the Eastern Rubber Co. (Reading), which was incorporated in 1898, and had a brief career.

=Certain suits having been brought in the courts at Logansport, Indiana, against William D. Owen, in connection with the affairs of the Ubero plantation companies, counsel for Owen appeared and asserted that he is no longer a resident of that state. As Owen has been in Europe for some time it would thus appear that he has nowhere a legal residence within the jurisdiction of any American court.

=The Cincinnati Rubber Manufacturing Co. lately organized to acquire the rubber plant of the Whitman & Barnes Manufacturing Co. at Akron, Ohio, have purchased 5 acres of land at Norwood, a suburb of Cincinnati and awarded contracts for the necessary building. The company hope to be ready for business in their new location by August.

=Poel & Arnold, crude rubber merchants, have removed their New York offices to No. 277 Broadway.



=The United States Rubber Co. on May 25 filed with the secretary of state of New Jersey a certificate increasing the company's capital stock from \$50,000,000 to \$75,000,000—including \$40,000,000 in first preferred, \$10,000,000 in second preferred, and \$25,000,000 in common stock. This is for the purpose of acquiring control of the Rubber Goods Manufacturing Co.

=Despite all assertions that the leading rubber manufacturers of Canada are not to amalgamate, the report continues current in the Dominion that the purpose of the Commercial Rubber Co., incorporated at Ottawa in January last, is to serve as a holding company for the shares of four principal rubber factories, somewhat on the plan of organization of the United States Rubber Co., and that plans for the merger are now being considered. The management of one of the companies named in newspaper reports inform THE INDIA RUBBER WORLD: "The amalgamation of the different rubber companies of Canada to our knowledge has never been seriously discussed, and as far as this company is concerned, we are not by any means anxious for it."

=It is understood that plans have been approved for the new plant of Morgan & Wright, at Detroit, which is intended to be one of the largest and most complete rubber factories in the world.

#### PERSONAL MENTION.

THE factory of the Hartford Rubber Works Co. was visited on April 28 by the Duke of Manchester, who made a special trip from New York for the purpose of witnessing the manufacture of rubber tires, he being an enthusiastic automobilist. The Duke was escorted from New York by a representative of the company, and on arrival at Hartford was taken in an automobile first to the capitol for a call on the Governor of the State, after which he devoted some hours to an inspection of the factory.

=The Pará newspaper *Folha do Norte* prints in full (in Portuguese) the address of "Coronel Samuel P. Colt, presidente da Companhia de Borracha dos Estados-Unidos," delivered at the banquet of the New England Rubber Club, in Boston, on February 24. This address is naturally of much interest on the Amazon, owing to Colonel Colt's avowed belief that the region referred to is the world's great dependence for its supply of rubber.

=Mr. William Vernon Backus was elected on May 12 president of the society of the American Colony in the City of Mexico. Mr. Backus until recently was a lawyer residing at Cleveland, Ohio. On going to Mexico on professional business he became interested in the opportunities for investment there, and his work has resulted in the formation of three rubber planting companies. Recently he became a resident of Mexico City, where he will practice law, while retaining his interest in planting. The American Colony society is now preparing for the usual Fourth of July celebration.

=Mr. Ratcliffe Hicks, president of the Canfield Rubber Co. (Bridgeport, Connecticut), sailed from New York on May 27, to be absent in Europe until the end of summer.

## REVIEW OF THE CRUDE RUBBER MARKET.

THE feature of the market during the month has been one of increasing firmness, and prices for fine Pará grades have shown an advance, in spite somewhat larger visible supplies. Consumers, in consequence, have shown no disposition to buy beyond actual current requirements. The situation is variously explained, being attributed by some to the efforts of operators at New York and in Europe to main-

## A PARENT RUBBER COMPANY.

NO 3979 in the Corporation Record of the territory of New Mexico (Vol. V—page 323) relates to articles of incorporation of the Western Parent Rubber Co., filed May 6, 1905, 3 P. M. It is impossible here to enumerate all the purposes of said company, but they are partially set forth in one of the articles, as follows:

*Third.* That its purposes are and shall be the following: To buy, sell, lease, and deal in - - - sheep, cattle, and other live stock; - - - to own, operate, and maintain sawmills and lumber camps; to manufacture crude rubber and rubber goods; - - - to acquire, own, have, hold, sell, and deal in discoveries whether patented or unpatented, and patent rights of all kinds; - - - to institute proceedings for the patenting of and to bring to patent the alleged discovery of Benjamin F. Spencer for the manufacture of an India-rubber substitute from *Actinella Richardsonii* - - - to amalgamate or consolidate with other corporations or to be amalgamated or consolidated with other corporations - - -.

The capital stock is to be \$100,000, in \$100 shares, and the incorporators, with the number of shares held by each, are: Ishmael Sparks (150), Harvie Du Val (50), Morton C. Miller (50), Hiram B. Cartwright (50), John Howard Vaughn (50), and Alois B. Renehan (50). The principal office is at No. 135 Palace avenue, Sante Fé, New Mexico, in charge of Alois B. Renehan. Harvie Du Val was mentioned recently in this Journal [January 1, 1905—page 125] as the chief parent of The Salida Crude Rubber Co., at Salida, Colorado, to make rubber from "rabbit weed," and considered locally the starting of "one of the greatest industries in the age."

## REFORM DEMANDED IN NEW JERSEY.

[FROM "THE TRENTON NEWS," APRIL 26.]

THE commission appointed on Monday by Governor Stokes to report "some method of improving the judicial system and the system of procedure in this state" is to report "what changes in the judicial system can be made, with advantage, in order to prevent the use of two or more legal proceedings to settle controversies that can be conveniently settled in one; and in order to minimize delays due to litigations or objections upon points of procedure not involving the substantial rights of the parties."

Perhaps no better example of the need of reform can be given than that of the case of Fulton against the Grieb Rubber Co., which will probably be upon the Mercer court list for the May term. Concerning the merits of the litigation we have no opinion to express; but the case has already been tried three times in the Mercer court, and has been appealed as many times to the supreme court. It is to be heard for the fourth time in the Mercer circuit at the May term, must again be appealed, and for the ninth time be tried before a final decision is reached. Any system that permits such expensive and annoying delays in the determination of a suit needs reformation very badly. One trial and a single appeal should suffice to settle any difference between parties.

tain prices, and by others to the situation in the primary markets at Pará and Monáos, where holdings are small. At any rate the crop season is practically at an end, and further large arrivals are impossible until after the summer months.

Offerings at the Antwerp auction for May 31 aggregated 586 tons, but it was generally thought that prices would not fall below the values determined at the April sale.

Following is a statement of prices of Pará grades, one year ago, one month ago, and on May 31—the current date:

PARÁ.	June 1, '04.	May 1, '05.	May 31.
Islands, fine, new.....	109@110	129@130	132@133
Islands, fine, old.....	none here	none here	none here
Upriver, fine, new.....	113@114	130@131	133@134
Upriver, fine, old.....	114@115	none here	none here
Islands, coarse, new.....	64@65	73@74	76@77
Islands, coarse, old.....	none here	75@76	none here
Upriver, coarse, new.....	88@89	95@96	97@97
Upriver, coarse, old.....	none here	none here	none here
Caucho (Peruvian) sheet.....	70@71	73@74	74@75
Caucho (Peruvian) ball.....	80@81	81@82	82@83

Prices for other grades in the New York market show little change, as follows:

AFRICAN.	CENTRALS.
Sierra Leone, 1st quality 101@102	Esmeralda, sausage...86 @87
Massai, red..... 101@102	Guayaquil, strip.....74 @75
Benguella..... 76@77	Nicaragua, scrap...84 @85
Cameroon ball..... 67@68	Panama, slab.....64 @65
Accra flake..... 29@30	Mexican, scrap.....86 @87
Lopori ball, prime..... 106@107	Mexican, siab.....60 @61
Lopori strip, prime..... 102@103	Mangabeira, sheet...63 @64
Ikelemba..... 107@108	EAST INDIAN.
Madagascar, pinky.... 87@88	Assam.....97 @98
	Borneo.....42 @43

#### Late Pará cables quote:

Per Kilo.	Per Kilo.
Islands, fine..... 6\$200	Upriver, fine..... 7\$300
Islands, coarse..... 3\$000	Upriver, coarse..... 5\$000

Exchange, 16<sup>3</sup>/<sub>4</sub>d.

#### Last Manáos advices:

Upriver, fine.....7\$300	Upriver, coarse..... 4\$600
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Exchange, 16d.

#### NEW YORK RUBBER PRICES FOR APRIL (NEW RUBBER).

	1904.	1905.	1903.
Upriver, fine.....	1.31@1.34	1.07@1.12	90 @93
Upriver, coarse.....	96@99	84@88	72 @74
Islands, fine.....	1.27@1.30	1.05@1.09	87 @91
Islands, coarse.....	73@77	64@69	56 @60
Cameté.....	76@80	64@69	61 @63

In regard to the financial situation, Albert B. Beers (broker in India-rubber, No. 68 William street, New York), advises us:

"There is practically nothing to add to the report a month ago regarding the market for commercial paper, which has ruled very steady through May, with a fairly good demand for the best rubber names at 4 @ 5 per cent. and the smaller concerns 5 @ 6 per cent."

#### Statistics of Para Rubber (Excluding Caucho).

NEW YORK.				
	Fine and Medium.	Coarse.	Total 1905.	Total 1904.
Stocks, March 31..... tons	221	122 =	343	246
Arrivals, April.....	1026	306 =	1422	1047
Aggregating.....	1247	518 =	1765	1293
Deliveries, April.....	890	264 =	1154	990
Stocks, April 30.....	357	254 =	611	303

PARÁ.			ENGLAND.		
	1903.	1904.	1903.	1904.	1905.
Stocks, March 31..... tons	829	605	275	480	1550
Arrivals, April.....	1420	1460	930	590	1087
Aggregating.....	2249	2065	1205	1070	2637
Deliveries, April.....	1753	1955	850	575	962
Stocks, April 30.....	406	110	355	405	1675

	1903.	1904.	1905.
World's visible supply, April 30..... tons	2403	1981	3691
Pará receipts, July 1 to April 30.....	24,676	23,805	23,756
Pará receipts of Caucho, same dates.....	4364	3729	3104
Afloat from Pará to United States, April 30.....	136	573	731
Afloat from Pará to Europe, April 30.....	805	500	580

#### Rubber Receipts at Manaus.

DURING March and nine months of the crop season for three years [courtesy of Messrs. Witt & Co.]:

FROM—	1902.	1901.	1903.	1904.	1905.
Rio Purús—Acre..... tons	666	234	517	5491	5165
Rio Madeira.....	337	356	206	2628	2444
Rio Juruá.....	512	329	384	3152	3111
Rio Javary—Iquitos.....	160	115	85	2397	2183
Rio Solimões.....	66	46	105	788	735
Rio Negro.....	60	26	94	566	324
Total.....	1756	1106	1437	15,022	14,022
Caucho.....	709	630	372	3262	2710
Total.....	2465	1736	1807	18,284	16,732

#### Antwerp.

##### RUBBER ARRIVALS AT ANTWERP.

APRIL 25.—By the *Leopoldville*, from the Congo:

Bunge & Co..... (Société Générale Africaine) kilos	138,500
Do.....	19,000
Do..... (Sultanats du Haut Obangi)	3,200
Do..... (Société "La Kotto")	3,500
Do..... (Cie. du Kasai)	87,000
Do..... (Chemins de fer Grand Lacs)	8,000
Société A B I R.....	41,000
Comptoir Commercial Congolais.....	12,000
Société Equatoriale Congolaise.. (Société l'Ikelemba)	3,600
Edm. Van Stoonsel..... (Haut Congo Bruxelloise)	18,500
M. S. Cols..... (Alima)	5,400
Do..... (Mr. C. D'Heygere)	1,100
Société General de Commerce..... (Alimaienne)	4,400
Charles Dethier..... (Société La "M'Poko")	3,000
Société Coloniale Anversoise. (Belge du Haut Congo)	13,000
Do..... (Cie. de Lomami)	15,000
Do..... (Sud Kamerun)	4,000
	380,200

#### ANTWERP RUBBER STATISTICS FOR APRIL.

DETAILS.	1905.	1904.	1903.	1902.	1901.
Stocks, Mar. 31 kilos	323,945	700,735	271,884	841,678	843,934
Arrivals in April...	651,928	179,098	605,743	307,834	613,368
Congo sorts.....	549,774	120,240	517,127	261,107	518,107
Other sorts.....	111,154	58,858	88,616	46,727	95,261
Aggregating....	975,873	879,833	877,627	1,149,512	1,457,202
Sales in April.....	339,998	438,212	358,828	648,848	643,384
Stocks, April 30..	635,875	441,621	488,799	500,664	813,818
Arrivals since Jan. 1	1,032,955	1,816,900	1,751,871	1,809,323	2,186,678
Congo sorts.....	1,542,898	1,444,417	1,575,504	1,648,227	1,943,811
Other sorts.....	390,057	372,483	176,367	161,100	242,867
Sales since Jan. 1..	1,838,441	1,986,179	1,921,177	1,723,368	1,986,899

#### Bordeaux.

##### IMPORTATION OF CAOUTCHOUC.

MONTH.	1904.	1905.
January..... kilos	54,550	130,255
February.....	160,025	126,540
March.....	94,615	173,155
Total.....	318,190	429,950

#### Ceylon Exports (Plantation Rubber).

##### DETAILS—BY WEEKS.

WEEKS.	1903.	1904.	1905.
Week ending Jan. 9.....	35	—	5012
Week ending Jan. 16.....	—	—	3733
Week ending Jan. 23.....	303	—	60
Week ending Jan. 30.....	1895	—	2784
Week ending Feb. 6.....	2950	—	300
Week ending Feb. 13.....	1453	—	—
Week ending Feb. 20.....	2058	—	—
Week ending Feb. 28.....	4866	—	—
Week ending Mar. 6.....	436	—	—
Week ending Mar. 13.....	4968	—	—
Total.....	—	—	30,853
Same weeks, 1904.....	—	—	24,662
Same weeks, 1903.....	—	—	12,402

##### DESTINATION.

Great Britain.....	18,622	Australia.....	1,147
Germany.....	9,505	United States.....	1,579



## London.

EDWARD TILL &amp; Co. [May 1] report stocks:

	1903.	1904.	1905.
Pará sorts..... tons	—	—	—
Borneo.....	12	9	13
Assam and Rangoon.....	3	5	4
Penang.....	170	—	—
Other sorts.....	192	225	192
Total.....	377	239	209
Pará.....	256	495	1681
Caucho.....	298	282	249
Other sorts.....	484	628	400
Total, United Kingdom.....	1415	1644	2539
Total, April 1.....	1232	1367	2525
Total, March 1.....	1264	1136	1939

## PRICES PAID DURING APRIL.

	1903.	1904.	1905.
Pará fine, hard.....	5/ 7 @ 5/ 8	4/ 6 1/4 @ 4/ 9	3/ 9 1/2 @ 3/ 10 3/4
Do soft.....	5/ 6 1/4 @ 5/ 6 1/4	4/ 5 3/4 @ 4/ 7 1/2	3/ 10 @ 3/ 10 3/4
Negroheads, scrappy.....	4/ 2 @ 4/ 2 1/4	3/ 6 1/4 @ 3/ 8 1/2	3/ 0 1/2 @ 3/ 1 1/2
Do Cametá.....	3/ 3 1/2 @ 3/ 3 1/2	2/ 10 @ 2/ 11 1/2	2/ 7 3/4 @ 2/ 9
Bolivian.....	5/ 7 @ 5/ 7 1/2	4/ 7 @ 4/ 9	No sales
Caucho, ball.....	3/ 3 @ 3/ 4 1/4	3/ 2 1/4 @ 3/ 4	2/ 10 1/2 @ 2/ 10 1/2
Do slab.....	3/ 1 @ 3/ 1	2/ 9 1/2 @ 2/ 10	2/ 4 @ 2/ 6
Do tails.....	No sales	No sales	No sales

## THE LATEST AUCTION.

MAY 12.—The market for Pará has been firmer, but, with a scarcity of sellers, only a moderate business has been done, including fine hard, spot and near delivery, at 5s. 7 1/2 d. @ 5s. 7 3/4 d., closing buyers at 5s. 7 1/2 d., and sellers at 5s. 8 d. Soft fine on the spot and near sold at 5s. 7 1/2 d. @ 5s. 8 d. At auction to-day medium grades were in moderate supply and met a good demand at full prices. Colombian fine clean brown scrap sold at 3s. 10 d.; Madagascar mixed pinky and white sheet at 3s. 3 1/4 d.; Borneo fair clean at 2s. 5 1/4 d.

## PLANTATION RUBBER.

April 28 Auction.—Straits: 19 packages offered and 17 sold; fair to good biscuits 6s. 3 d. @ 6s. 6 1/2 d.; fine red scrap 4s. 11 d.; black pressed sheet (*Ficus* rubber) 4s. 6 3/4 d. Ceylon: 7 packages offered and 6 sold; fine pale thin biscuits 6s. 6 3/4 d.; thick dark ditto 6s. 6 1/4 d.

May 12 Auction.—Thirty packages offered and sold. Fine washed Straits, pale clean (crepe or lace rubber) at 6s. 8 d. @ 6s. 8 1/2 d.; [= \$1.65] ditto dark at 6s. 1 d., fine biscuits at 6s. 5 1/2 d. @ 6s. 7 d. Fine thin Ceylon biscuits at 6s. 6 1/4 d., large ditto at 6s. 8 d., scrap at 4s. 7 d. @ 5s. —Sales of about 100 packages of Assam included fine clean red plantation (*Ficus elastica*) at 4s. 8 d.; grayish ditto at 4s. 6 1/2 d.

## Liverpool.

EDMUND SCHLÜTER &amp; Co. report [April 30]:

The figures reveal a continuance of the comparatively small supply of fine Rubber, and a full supply of Caucho, and it may be safe to assume that the former will maintain its value, while the latter, although low in price, may not go dearer till receipts become smaller during the summer.—The visible supply of Pará grades on April 30 has been:

	1903.	1904.	1905.
Tons.....	3568	2777	4316
Including in London bankers' hands.....	—	—	4280
Total.....	—	—	4530

## Rubber Scrap Prices.

NEW YORK quotations—prices paid by consumers for carload lots, in cents per pound—show no change since the last report:

Old Rubber Boots and Shoes—Domestic.....	5 7/8 @ 6
Do —Foreign.....	5 1/4 @ 5 3/8
Pneumatic Bicycle Tires.....	4 1/4 @ 4 1/2
Solid Rubber Wagon and Carriage Tires.....	6
White Trimmed Rubber.....	8 1/2 @ 8 3/4
Heavy Black Rubber.....	4
Air Brake Hose.....	2 1/2 @ 2 5/8
Fire and Large Hose.....	2 @ 2 1/4
.....	1 3/4 @ 1 7/8
.....	1 1/4 @ 1

## Canada.

IMPORTS (in value) of crude India-rubber and Gutta-percha, reclaimed rubber, and substitutes, for the last six months of three years:

	1903.	1904.	1905.
Great Britain.....	\$ 6,367	\$ 3,399	\$ 9,422
United States.....	746,171	1,108,138	1,379,298
Other countries.....	513	919	107
Totals.....	\$753,051	\$1,112,456	\$1,388,827

## IMPORTS FROM PARA AT NEW YORK.

[The Figures Indicate Weights in Pounds.]

May 5.—By the steamer *Horatio*, from Manáos and Pará:

IMPORTERS.	Fine.	Medium.	Coarse.	Caucho.	Total
Poel & Arnold.....	60,500	11,200	46,300	12,700=	130,700
New York Commercial Co.....	29,100	5,200	22,100	600=	57,000
Neale & Co.....	24,300	3,800	7,600	....=	35,700
A. T. Morse & Co.....	3,500	300	27,700	300=	31,800
Edmund Reeks & Co.....	20,300	....	6,500	3,600=	30,400
General Rubber Co.....	1,300	700	1,200	23,500=	26,700
Hagemeyer & Brunn.....	6,800	1,300	2,200	....=	10,300
G. Amsinck & Co.....	....	....	....	5,400=	5,400
Lawrence Johnson & Co.....	....	....	....	5,000=	5,000
Total.....	145,800	22,500	113,600	51,100=	333,000

May 15.—By the steamer *Cearense*, from Manáos and Pará:

New York Commercial Co.....	101,200	40,000	68,500	2,500=	212,200
Poel & Arnold.....	26,500	6,100	27,200	48,200=	108,000
A. T. Morse & Co.....	16,500	3,100	37,300	700=	57,600
General Rubber Co.....	500	200	500	54,200=	55,400
Neale & Co.....	34,500	3,700	6,000	600=	44,800
Laurence Johnson & Co.....	1,900	....	1,900	22,000=	25,800
Lionel Hagenaers & Co.....	6,600	....	3,000	....=	9,600
Thomsen & Co.....	5,000	600	6,400	....=	12,000
Hagemeyer & Brunn.....	....	....	....	8,100=	8,100
Arana, Bergman & Co.....	....	....	....	9,000=	9,000
Edmund Reeks & Co.....	3,700	300	3,000	400=	7,400
G. Amsinck & Co.....	....	....	....	2,800=	2,800
Total.....	196,400	54,000	153,800	148,500=	552,700

May 25.—By the steamer *Fluminense*, from Manáos and Pará:

Poel & Arnold.....	60,600	11,700	37,200	20,400=	129,900
A. T. Morse & Co.....	39,900	11,500	40,300	12,300=	101,000
New York Commercial Co.....	14,600	5,800	16,300	30,300=	67,000
General Rubber Co.....	....	....	....	75,100=	75,100
Neale & Co.....	22,900	4,300	13,600	2,300=	43,100
Czarnikow, MacDougal Co.....	6,500	2,600	400	....=	9,500
Hagemeyer & Brunn.....	900	100	4,200	1,400=	6,600
Lionel Hagenaers & Co.....	4,900	....	1,400	....=	6,300
G. Amsinck & Co.....	2,700	....	500	....=	3,200
Total.....	150,000	36,000	113,900	141,800=	441,700

[NOTE.—The steamer *Poharap*, from Pará, is due at New York, June 2, with 130 tons Rubber and 50 tons Caucho.]

## POSITIONS OPEN.

SALESMAN.—Experienced Salesman wanted on Rubber Coated Carriage and Organ Cloths, for large territory. Address with full particulars, B. T., care of THE INDIA RUBBER WORLD. [785]

WANTED.—By an old established concern making a varied line of Rubber Goods Foreman or Assistant that can qualify in the Molded and Wrapped Goods department; also one for the Druggists' Sundries department. Address M. P. Q., care of THE INDIA RUBBER WORLD. [786]

WANTED.—By a large Mechanical factory, men who are now acting as Assistant Foremen in Hose and Bicycle Tire departments. Address T. R. E., care of THE INDIA RUBBER WORLD. [787]

WANTED.—Experienced Belt Maker capable as a General Assistant in a factory making a large volume of belting of every description; also experienced and able man having the necessary executive ability to take charge of Calendar and Mill Room. Address H. M. F., care of THE INDIA RUBBER WORLD. [788]

WANTED.—A Calendar Man wanted capable of running all kinds of Tire stocks and Mechanical goods. Good position for the right man. State wages expected, and full details as to experience, qualification, etc., etc. Also a good Mill Man wanted. Address C. A. N., care of THE INDIA RUBBER WORLD. [789]

## PARA RUBBER VIA EUROPE.

FOUNDS.		
APR. 28.—By the <i>Teutonic</i> =Liverpool:		
Poel & Arnold.....	23,000	
A. T. Morse & Co. (Fine).....	13,500	11,500

MAY 8.—By the <i>Umbria</i> =Liverpool:		
General Rubber Co. (Fine).....	22,560	

MAY 22.—By the <i>Etruria</i> =Liverpool:		
New York Commercial Co. (Fine)...	22,500	

## OTHER ARRIVALS IN NEW YORK

## CENTRALS.

FOUNDS.		
APR. 24.—By the <i>Michigan</i> =London:		
Poel & Arnold.....	8,000	

APR. 24.—By the <i>Monterey</i> =Mexico:		
H. Marquardt & Co. ....	5,000	
Fred. Probst & Co. ....	2,000	
L. N. Chemedin & Co. ....	600	
Graham, Hinkley & Co. ....	600	8,200

APR. 24.—By the <i>Flandria</i> =Santa Marta:		
G. Amsinck & Co. ....	4,500	

APR. 25.—By the <i>Carib II.</i> =Honduras:		
Eggers & Heinlein.....	8,000	
Clede Belgica.....	2,500	
H. W. Peabody & Co. ....	700	11,200

APR. 25.—By the <i>El Paso</i> =New Orleans:		
A. T. Morse & Co. ....	2,500	
Manhattan Rubber Mfg. Co. ....	2,500	5,000

APR. 26.—By the <i>Sibiria</i> =Colombian Ports:		
D. A. De Lima & Co. ....	3,500	
A. F. Hanneburg.....	3,000	
Isaac Kuble & Co. ....	2,500	
A. A. Lindo & Co. ....	1,600	
Isaac Brandon & Bros. ....	1,000	
Pedro A. Lopez.....	800	
Samuels Brothers.....	600	12,900

APR. 26.—By the <i>Advance</i> =Colon:		
Dumarest Bros. & Co. ....	4,700	
G. Amsinck & Co. ....	3,500	
A. Santos & Co. ....	3,000	
American Trading Co. ....	2,600	
Hirzel, Feltman & Co. ....	1,100	
Roldan & Van Sickle.....	1,000	
Gabriel Perigault.....	1,000	
De Sola, Lobo & Co. ....	500	17,400

APR. 27.—By the <i>Georgie</i> =Liverpool:		
Hirsch & Kaiser.....	14,000	

APR. 29.—By the <i>Valdivia</i> =Cartagena:		
D. A. De Lima & Co. ....	3,000	
Cortez Comm'l Co. ....	3,000	
Mecke & Co. ....	1,500	7,500

MAY 1.—By the <i>Finance</i> =Colon:		
G. Amsinck & Co. ....	9,200	
J. A. Medina & Co. ....	3,400	
Lawrence Johnson & Co. ....	1,800	
Hirzel, Feltman & Co. ....	2,300	
Silva, Bussenus & Co. ....	1,500	
George A. Alden & Co. ....	1,000	
R. G. Barthold.....	600	19,800

MAY 1.—By the <i>Comus</i> =New Orleans:		
A. T. Morse & Co. ....	11,500	
Manhattan Rubber Mfg. Co. ....	6,500	
A. N. Rotholz.....	3,000	
G. Amsinck & Co. ....	2,500	22,500

MAY 1.—By the <i>Esperanza</i> =Mexico:		
Harburg & Stack.....	8,500	
E. Steiger & Co. ....	6,500	
H. Marquardt & Co. ....	6,000	
E. N. Tibbals & Co. ....	1,000	
Isaac Kuble & Co. ....	800	
Graham, Hinkley & Co. ....	600	
Thebaud Brothers.....	1,000	24,400

MAY 2.—By the <i>Altai</i> =Belize:		
European Option.....	18,000	
Eggers & Heinlein.....	2,500	
G. Amsinck & Co. ....	2,500	
J. Augener.....	2,400	
H. S. & Neven.....	1,500	
A. Rosenthal's Sons.....	1,000	
Isaac Brandon & Bros. ....	700	
Lawrence Johnson & Co. ....	600	28,800

MAY 1.—By the <i>Celtic</i> =Liverpool:		
Poel & Arnold.....	50,000	
A. T. Morse & Co. ....	29,000	79,000

MAY 2.—By the <i>Zeeland</i> =Antwerp:		
A. T. Morse & Co. ....	24,000	
Rubber Trading Co. ....	11,000	
Joseph Cantor.....	10,000	45,000

MAY 4.—By the <i>Orizaba</i> =Colon:		
E. B. Strout.....	6,200	
G. Amsinck & Co. ....	1,500	
D. A. De Lima & Co. ....	800	8,500

## CENTRALS—Continued.

MAY 8.—By the <i>Vigilancia</i> =Mexico:		
George A. Alden & Co. ....	18,000	
E. Steiger & Co. ....	3,000	
American Trading Co. ....	1,500	
Harburger & Stack.....	1,300	
Graham Hinkley & Co. ....	1,500	
H. Marquardt & Co. ....	1,500	
Fred. Probst & Co. ....	600	27,000

MAY 8.—By the <i>Proteus</i> =New Orleans:		
Manhattan Rubber Mfg. Co. ....	7,500	
A. T. Morse & Co. ....	3,500	
Earle Brothers.....	1,000	12,000

MAY 9.—By the <i>Thespis</i> =Bahia:		
J. H. Rossbach & Bros. ....	5,500	
American Commercial Co. ....	6,500	
Hirsch & Kaiser.....	1,500	13,500

MAY 10.—By the <i>Sarnia</i> =Colombian ports:		
Kunhardt & Co. ....	2,500	
H. B. Clatin & Co. ....	2,000	
John Boyd, Jr. & Co. ....	1,000	
A. Held.....	700	
Pedro A. Lopez.....	500	
Isaac Kuble & Co. ....	800	
A. D. Straus & Co. ....	1,000	
A. A. Lindo & Co. ....	800	
Isaac Brandon & Bros. ....	1,000	10,300

MAY 11.—By the <i>Segurana</i> =Colon:		
Dumarest Bros. & Co. ....	5,000	
Gabriel Perigault.....	4,800	
G. Amsinck & Co. ....	4,300	
A. Santos & Co. ....	3,700	
Hirzel, Feltman & Co. ....	3,000	
W. R. Grace & Co. ....	2,000	
Lawrence Johnson & Co. ....	1,900	
Roldan & Van Sickle.....	1,700	26,400

MAY 13.—By the <i>Havana</i> =Mexico:		
H. Marquardt & Co. ....	5,000	
A. T. Morse & Co. ....	2,000	
E. N. Tibbals & Co. ....	700	
Graham, Hinkley & Co. ....	700	
American Trading Co. ....	500	8,900

MAY 15.—By the <i>Comus</i> =New Orleans:		
A. T. Morse & Co. ....	9,500	

MAY 16.—By the <i>Alleghany</i> =Colombian ports:		
A. T. Hanneburg.....	5,000	
Isaac Kuble & Co. ....	1,500	
Kunhardt & Co. ....	1,500	
Lawrence Johnson & Co. ....	1,200	
John Boyd, Jr. & Co. ....	600	
Isaac Brandon & Bros. ....	500	
Lionel Hagenaers & Co. ....	500	
J. A. Medina & Co. ....	500	11,300

MAY 16.—By the <i>Alliance</i> =Colon:		
Hirzel, Feltman & Co. ....	13,500	
G. Amsinck & Co. ....	9,800	
J. A. Medina & Co. ....	6,900	
Isaac Brandon & Bros. ....	6,700	
A. Rosenthal's Sons.....	2,500	
Gabriel Perigault.....	1,000	
Eggers & Heinlein.....	1,600	41,400

MAY 18.—By the <i>Cevic</i> =Liverpool:		
J. H. Rossbach & Bros. ....	4,500	
Wallace L. Gough.....	2,500	7,000

MAY 20.—By the <i>Monterey</i> =Mexico:		
Harburger & Stack.....	2,500	
Thebaud Brothers.....	2,000	
E. Steiger & Co. ....	1,200	
H. Marquardt & Co. ....	800	
Graham Hinkley & Co. ....	500	7,000

MAY 20.—By the <i>Advance</i> =Colon:		
G. Amsinck & Co. ....	18,500	
Piza Nephews & Co. ....	6,800	
A. M. Capen's Sons.....	5,500	
Roldan & Van Sickle.....	2,800	
Dumarest Bros. & Co. ....	2,600	
E. B. Strout.....	2,400	
Lawrence Johnson & Co. ....	2,300	
Isaac Brandon & Bros. ....	1,500	
J. A. Medina & Co. ....	1,000	
Hirzel Feltman & Co. ....	900	
Charles E. Griffin.....	700	45,000

MAY 20.—By the <i>Tennyson</i> =Bahia:		
Hirsch & Kaiser.....	16,500	
J. H. Rossbach & Bros. ....	10,000	
A. D. Hitch & Co. ....	500	27,000

MAY 22.—By the <i>El Monte</i> =New Orleans:		
A. T. Morse & Co. ....	5,500	

MAY 23.—By the <i>Yucatan</i> =Mexico:		
H. Marquardt & Co. ....	4,000	
Graham, Hinkley & Co. ....	1,000	
For Europe.....	17,000	22,000

MAY 24.—By the <i>Sibiria</i> =Cartagena:		
Isaac Kuble & Co. ....	2,000	
A. Held.....	1,700	
D. A. De Lima & Co. ....	1,000	

## CENTRALS—Continued.

Lawrence Johnson & Co. ....	1,300	
Cadenas & Coe.....	700	
Pedro A. Lopez.....	500	7,200

## AFRICANS.

APR. 24.—By the <i>Etruria</i> =Liverpool:		
George A. Alden & Co. ....	12,000	
Earle Brothers.....	7,500	19,500

APR. 24.—By the <i>La Bretagne</i> =Havre:		
George A. Alden & Co. ....	17,500	

APR. 24.—By the <i>Kronland</i> =Antwerp:		
Poel & Arnold.....	67,000	
George A. Alden & Co. ....	15,000	
A. T. Morse & Co. ....	15,000	127,000

APR. 27.—By the <i>Georgie</i> =Liverpool:		
Henry A. Gould Co. ....	17,000	
Rubber Trading Co. ....	3,000	
A. T. Morse & Co. ....	6,000	
Voorhees Rubber Mfg. Co. ....	1,500	28,000

APR. 28.—By the <i>Patricia</i> =Hamburg:		
George A. Alden & Co. ....	33,000	
A. T. Morse & Co. ....	25,000	
Rubber Trading Co. ....	9,000	
Poel & Arnold.....	2,500	
Earle Brothers.....	3,500	73,000

MAY 1.—By the <i>La Lorraine</i> =Havre:		
General Rubber Co. ....	34,000	
George A. Alden & Co. ....	25,000	59,000

MAY 4.—By the <i>Oceanic</i> =Liverpool:		
A. T. Morse & Co. ....	11,500	
A. W. Brunn.....	7,000	
Joseph Cantor.....	1,500	20,000

MAY 8.—By the <i>Umbria</i> =Liverpool:		
A. T. Morse & Co. ....	22,500	
Earle Brothers.....	2,500	25,000

MAY 8.—By the <i>La Touraine</i> =Havre:		
General Rubber Co. ....	13,500	
Poel & Arnold.....	4,500	18,000

MAY 8.—By the <i>Pretoria</i> =Hamburg:		
A. T. Morse & Co. ....	60,000	
Poel & Arnold.....	50,000	
George A. Alden & Co. ....	11,000	
Rubber Trading Co. ....	5,000	126,000

MAY 10.—By the <i>Finland</i> =Antwerp:		
Poel & Arnold.....	30,000	
Rubber Trading Co. ....	5,000	
A. T. Morse & Co. ....	71,000	106,000

MAY 10.—By the <i>Caronia</i> =Liverpool:		
George A. Alden & Co. ....	45,000	
Poel & Arnold.....	11,500	56,500

MAY 11.—By the <i>Victorian</i> =Liverpool:		
Poel & Arnold.....	20,000	

MAY 11.—By the <i>Peninsular</i> =Lisbon:		
General Rubber Co. ....	45,000	

MAY 11.—By the <i>Majestic</i> =Liverpool:		
Poel & Arnold.....	89,000	
George A. Alden & Co. ....	22,000	
Winter & Smilie.....	4,500	115,500

MAY 13.—By the <i>Lucania</i> =Liverpool:		
George A. Alden & Co. ....	30,000	
Earle Brothers.....	9,000	
Henry A. Gould.....	2,500	42,500

MAY 16.—By the <i>Alexandria</i> =Hamburg:		
A. T. Morse & Co. ....	50,000	
Robinson & Tallman.....	7,000	57,000

MAY 17.—By the <i>Vaderland</i> =Antwerp:		
Joseph Cantor.....	30,000	

MAY 19.—By the <i>Baltic</i> =Liverpool:		
George A. Alden & Co. ....	32,000	
Poel & Arnold.....	3,500	
Wallace L. Gough.....	2,000	
A. W. Brunn.....	1,500	40,000

MAY 19.—By the <i>Graf Waldseer</i> =Hamburg:		
A. T. Morse & Co. ....	4,500	
Poel & Arnold.....	2,500	7,000

MAY 20.—By the <i>La Bretagne</i> =Havre:		
General Rubber Co. ....	9,000	

MAY 22.—By the <i>Minnetonka</i> =London:		
George A. Alden & Co. ....	5,000	

MAY 22.—By the <i>Etruria</i> =Liverpool:		
Wallace L. Gough.....	19,600	
Rubber Trading Co. ....	3,500	13,500

MAY 23.—By the <i>Kronland</i> =Antwerp:		
George A. Alden & Co. ....	44,000	
Poel & Arnold.....	99,000	



## EAST INDIAN.

APR. 24.—By the *Michigan*=London:

George A. Alden & Co.	2,500	
Robinson & Tallman	2,500	5,000

APR. 25.—By the *Ris Issa*=Singapore:

Wallace L. Gough	15,000	
Windmuller & Reolker	5,000	20,000

MAY 1.—By the *Satsuma*=Singapore:

Poel & Arnold	35,000	
George A. Alden & Co.	2,000	
Robert Brann & Co.	2,000	
Robert Brann & Co.	1,000	
Winter & Smillie	1,000	
Pierre F. Betts	6,500	
L. Littlejohn & Co.	2,500	113,000

MAY 4.—By the *Desha*=London:

Robinson & Tallman	2,000	
Henry A. Gould Co.	2,000	4,000

MAY 5.—By the *Leberfeld*=Calcutta:

George A. Alden & Co.	3,000	
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MAY 9.—By the *Monagras*=London:

George A. Alden & Co.	10,000	
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MAY 13.—By the *Richmond Castle*=Singapore:

Poel & Arnold	30,000	
George A. Alden & Co.	10,000	
Robert Brann & Co.	15,000	
Wallace L. Gough	4,500	58,000

MAY 19.—By the *Bacarra*=Calcutta:

Poel & Arnold	15,000	
George A. Alden & Co.	2,500	
A. T. Morse & Co.	1,000	18,500

## GUTTA-JELUTONG

APR. 28.—By the *Ris Issa*=Singapore:

Wallace L. Gough	155,000	
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MAY 1.—By the *Satsuma*=Singapore:

Robert Brann & Co.	298,000	
Windmuller & Reolker	200,000	
Wallace L. Gough	100,000	
Pierre F. Betts	115,000	
Heabler & Co.	95,000	
Poel & Arnold	95,000	911,000

## EAST INDIAN—Continued.

MAY 13.—By the *Richmond Castle*=Singapore:

Heabler & Co.	200,000	
George A. Alden & Co.	150,000	
Pierre F. Betts	100,000	
Poel & Arnold	100,000	
J. H. Recknagel & Son	50,000	
Robert Brann & Co.	30,000	650,000

## GUTTA-PERCHA AND BALATA.

POUNDS

ARR. 24.—By the *Michigan*=London:

A. W. Bruhn	18,000	
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MAY 1.—By the *Satsuma*=Singapore:

George A. Alden & Co.	27,000	
Winter & Smillie	8,000	35,000

MAY 15.—By the *St. Louis*=London:

Wallace L. Gough	4,500	
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MAY 19.—By the *Graf Waldersee*=Hamburg:

To order	7,000	
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## BALATA.

MAY 8.—By the *New York*=London:

Earle Brothers	6,500	
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MAY 11.—By the *Grenada*=Trinidad:

Thebaud Brothers	15,000	
Frame & Co.	3,500	18,500

MAY 22.—By the *Philadelphia*=London:

Wallace L. Gough	4,500	
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## CUSTOM HOUSE STATISTICS.

## PORT OF NEW YORK—APRIL.

Imports:	POUNDS.	VALUE.
India-rubber	5,490,710	\$4,517,574
Gutta-percha	63,229	17,036
Gutta-jelutong (Pontianak)	2,385,664	72,543
Total	7,929,603	\$4,607,153

## Exports:

India rubber	175,741	\$136,014
Reclaimed rubber	295,358	33,263
Rubber Scrap Imported	1,710,250	\$450,455

## BOSTON ARRIVALS.

POUNDS.

APRIL 3.—By the *Sylvania*=Liverpool:

George A. Alden & Co.—Fine	30,000	
George A. Alden & Co.—Central	11,486	
George A. Alden & Co.—African	20,500	61,986

APR. 5.—By the *Sichem*=Liverpool:

George A. Alden & Co.—Fine	11,333	
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APR. 7.—By the *Ivernia*=Liverpool:

George A. Alden & Co.—Fine	14,392	
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APR. 10.—By the *Anglian*=London:

George A. Alden & Co.—African	5,222	
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APR. 12.—By *Cebriana*=Hamburg:

George A. Alden & Co.—Central	1,512	
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APR. 12.—By the *Sagunore*=Liverpool:

George A. Alden & Co.—African	3,729	
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APR. 18.—By the *Bohemian*=Liverpool:

Poel & Arnold—African	11,300	
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APR. 19.—By the *St. Leonardo*=Hamburg:

George A. Alden & Co.—Central	2,663	
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APR. 24.—By the *Saxonia*=Liverpool:

George A. Alden & Co.—African	15,880	
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APR. 25.—By the *Michigan*=Liverpool:

George A. Alden & Co.—African	9,940	
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APR. 29.—By the *Oakmore*=Antwerp:

Winter & Smillie—African	1,958	
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APR. 29.—By the *Cambrian*=London:

George A. Alden & Co.—East Indian	547	
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Total

[Value, \$118,796.]

## OFFICIAL STATISTICS OF CRUDE INDIA-RUBBER (IN POUNDS).

## UNITED STATES.

MONTHS.	IMPORTS.	EXPORTS.	NET IMPORTS.
March, 1905	9,053,471	377,492	8,675,979
January-February	17,358,994	350,856	17,008,108
Three months, 1905	26,412,435	728,348	25,684,087
Three months, 1904	23,266,349	609,245	22,357,104
Three months, 1903	16,197,808	868,965	15,328,843

## GERMANY.

MONTHS.	IMPORTS.	EXPORTS.	NET IMPORTS.
March, 1905	4,002,680	1,409,320	2,593,360
January-February	7,231,180	2,597,980	4,633,200
Three months, 1905	11,233,860	4,007,300	7,226,560
Three months, 1904	9,189,180	3,149,740	6,039,440
Three months, 1903	9,451,640	3,483,260	5,968,380

## FRANCE.\*

MONTHS.	IMPORTS.	EXPORTS.	NET IMPORTS.
March, 1905	2,612,720	948,200	1,664,520
January-February	4,552,460	1,940,780	2,605,680
Three months, 1905	7,165,180	2,894,980	4,270,200
Three months, 1904	5,971,680	3,324,260	2,147,420
Three months, 1903	3,837,680	2,101,880	1,735,800

## BELGIUM.†

MONTHS.	IMPORTS.	EXPORTS.	NET IMPORTS.
March, 1905	1,095,307	1,104,701	[† 9,394]
January-February	3,110,606	1,896,239	1,214,367
Three months, 1905	4,205,913	3,000,940	1,204,973
Three months, 1904	5,109,984	4,004,579	1,095,405
Three months, 1903	3,536,883	2,462,087	974,796

## GREAT BRITAIN.

MONTHS.	IMPORTS.	EXPORTS.	NET IMPORTS.
March, 1905	5,906,880	3,644,480	2,262,400
January-February	10,086,496	6,603,976	3,482,520
Three months, 1905	15,993,376	10,248,456	5,744,920
Three months, 1904	16,589,216	10,119,430	6,469,786
Three months, 1903	15,690,304	9,881,648	5,808,656

## ITALY.

MONTHS.	IMPORTS.	EXPORTS.	NET IMPORTS.
March, 1905	116,820	4,400	112,420
January-February	300,520	61,820	238,700
Three months, 1905	417,340	66,220	351,120
Three months, 1904	447,480	25,960	421,520
Three months, 1903	341,220	25,960	315,260

## AUSTRIA-HUNGARY.

MONTHS.	IMPORTS.	EXPORTS.	NET IMPORTS.
March, 1905	190,080	440	189,640
January-February	533,280	660	532,620
Three months, 1905	723,360	1,100	722,260
Three months, 1904	769,340	10,340	759,000
Three months, 1903	742,060	8,800	733,260

NOTE.—German statistics include Gutta-percha, Balata, old rubber, and substitutes. French, Austrian, and Italian figures include Gutta-percha. The exports from the United States embrace the supplies for Canadian consumption.

\* General Commerce

† Net Exports

‡ Special Commerce.

WILLIAM T. BAIRD, PRESIDENT

ROBERT B. BAIRD, VICE PRESIDENT

# RUBBER TRADING COMPANY

38 MURRAY STREET, NEW YORK

TELEPHONE: 1924 CORTLANDT

BOSTON OFFICE: 161 SUMMER STREET

TELEPHONE: 1599-2 OXFORD

CABLE ADDRESS: CHAUNBAIR, NEW YORK AND BOSTON

# CRUDE RUBBER

*Mention The India Rubber World when you write.*

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Largest Dealer in Russia  
Old Russian Rubber Boots *and* Shoes  
M. J. WOLPERT  
ODESSA, Russia

---

PICHER SUBLIMED  
WHITE AND BLUE LEAD

THE STANDARDS OF QUALITY FOR COMPOUNDING.

PICHER LEAD COMPANY,

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Works: JOPLIN, Missouri.

CHICAGO: Tacoma Building.

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**W**E have become thoroughly equipped for making **MOULDED ARTICLES IN RUBBER** of all kinds. We should like to have an opportunity of showing you what we can do. We shall be pleased to have you ask us to show you samples and prices. **IF YOU OWN MOULDS** let us show you how we can handle the goods for you.



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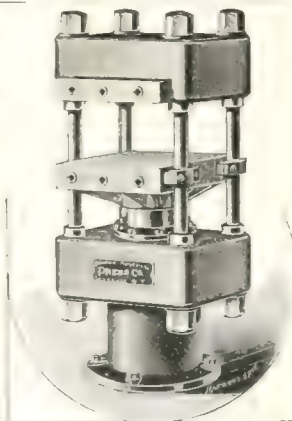
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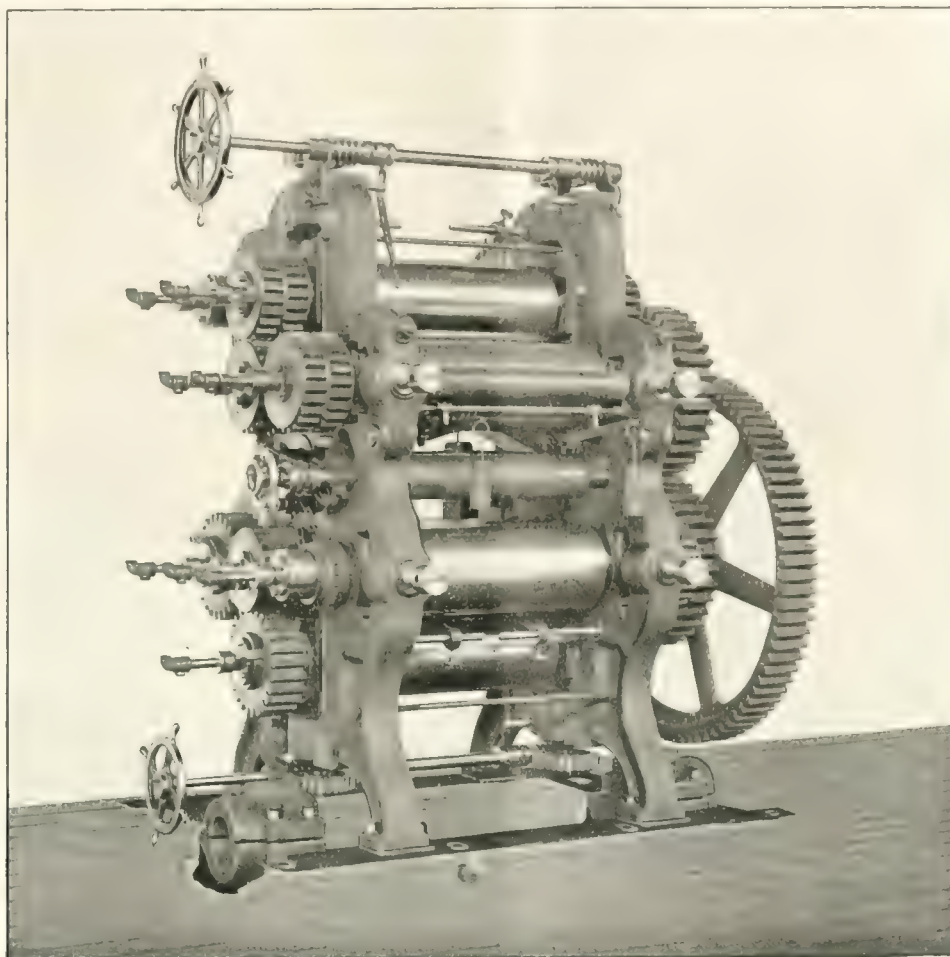
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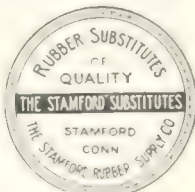
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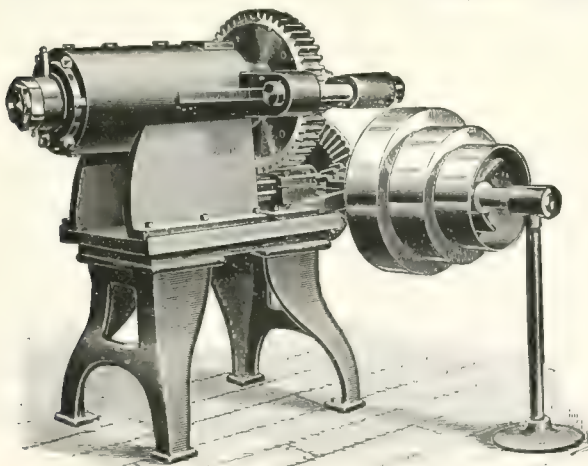
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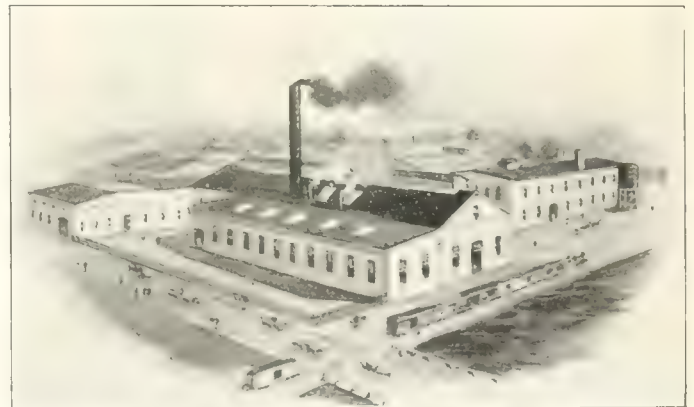
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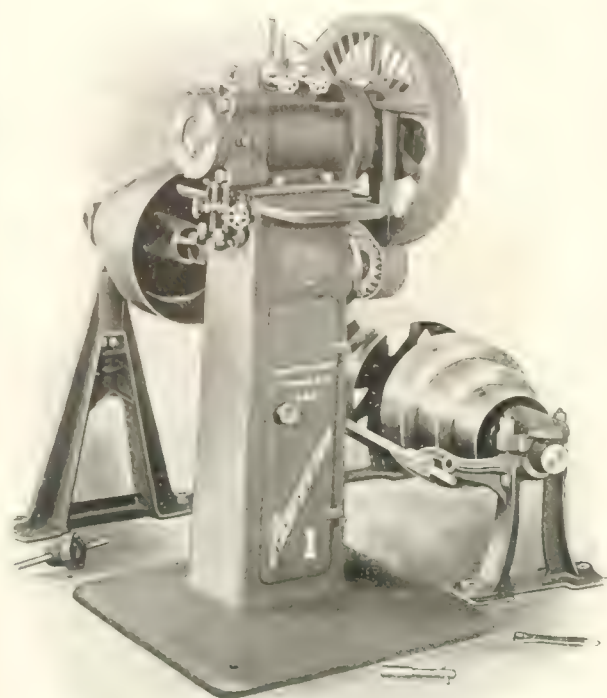
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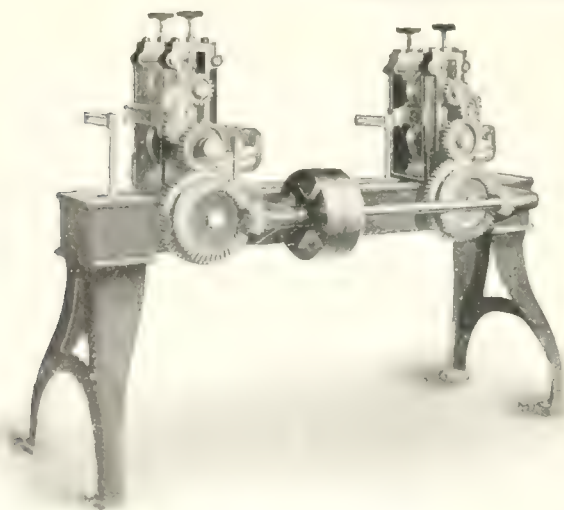
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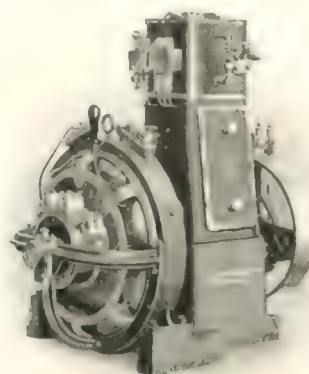
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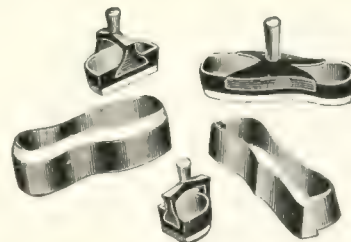
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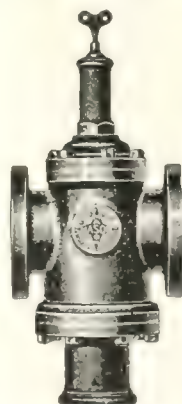
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2 years - - - - -	380.49		315.41	1 year - - - - -	83.29
1 year - - - - -	851.58	Contracted, 1905,	142.		126.79
	2078.32		457.41	Contracted, 1905,	100.
Contracted, 1905,	741.				226.79
	2819.32	Approximately 450,000 trees.		Approximately 40,000 trees.	
Approximately 2,000,000 Trees.		Cleared and planted to tame grasses for cattle and horses, 1190 Acres.			

WE began our planting in 1900 and complete it in 1905, making, we believe, the largest planting of cultivated rubber in the world.

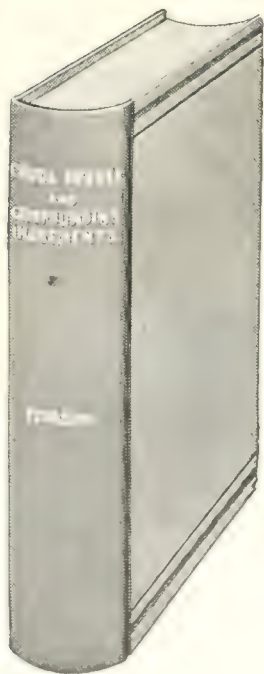
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INDIA RUBBER WORLD

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### *A Good Record for April.*

THE number of *bona fide* cash subscriptions added to the list of THE INDIA RUBBER WORLD during April, 1905, was larger than in any preceding month, and this without any unusual effort having been made to extend the list. There are some suspensions from the list every month, of course, but the net increase during April was exceptionally large. Besides, it included representatives of every branch of the India-rubber interest—manufacturers, jobbers, dealers, and planters—and we have had to record new addresses on every continent. These facts are mentioned, not in any spirit of boastfulness, but as a matter which may interest the advertisers in this Journal.

### *"Practical, Reliable, Authentic."*

TO THE INDIA RUBBER WORLD—*Gentlemen*: Kindly have the writer's house address changed on your records, in order that I may not miss the paper, as it is the only magazine containing practical as well as reliable and authentic news pertaining to the rubber industry. Thanking you in advance, and with kindest personal regards, I subscribe myself, Yours very truly,

OTIS R. COOK.

Cleveland, Ohio, May 17, 1905.

### *Subscribers' Changes of Address.*

SUBSCRIBERS desiring to have a change of address made on our mailing list will confer a favor by stating the former address as well as the new. Names on our mailing list are arranged by states and postoffices, and not alphabetically as names, and a search for a name without the help of the address last in use may consume considerable time.

### *"Abundance of Interesting Information."*

THE Pará journal *Fulha do Norte*, in quoting some lines from this Journal, mentions their appearance "in THE INDIA RUBBER WORLD, the excellent New York periodical dealing exclusively with rubber in its various forms and applications, and offering a great abundance of interesting information."

### *Better Than Laboratory Experiments.*

MR. HENRY C. PEARSON, Editor THE INDIA RUBBER WORLD, New York.—*Dear Mr. Pearson*: - - - In my capacity as Chemist for the Rubber Manufacturing Co., I have occasion at different times to use your book "Crude Rubber and Compounding Ingredients" as a reference, and I find that the information it contains is taken from actual experience with large rubber manufacturers, which information is more valuable than it is possible to get in laboratory experiments. I keep your book at hand for such reference. Very sincerely yours,

Chemist,

### *The Same Here.*

THE similarity of objects of THE INDIA RUBBER WORLD—in a certain sense—with that of an esteemed St. Louis contemporary, prompts us to lift from the columns of that journal into our own, the following paragraph, the spirit of which is commended to our readers:

"The province of *The Sporting Goods Dealer* is to advance the interests of trade by bringing manufacturer, jobber, and dealer in closer

touch and acquaintance. The purpose of each is to provide for the needs of the customer, and not only to meet but to anticipate them, for the character of the demand varies with the season. The greatest measure of success comes to the merchant who is never found unprepared to supply his patrons' requirements. The time has been when customers were content with an expressed willingness to 'rush' an order for desired goods not carried in stock, but nowadays they are less easily satisfied. If a merchant advertises 'complete lines and full stocks,' it is his business to make these claims good, knowing that his competitors are alert and watchful for the slightest opportunity to advance their own interests. The rivalry is none the less keen because of its freedom from personal enmity. Business is like a game of golf—if a player's ball flies wide of the course, his opponent rejoices and aims his own next stroke as accurately as he may, though success perhaps means defeat for his dearest friend. Like golf, again, the charm which makes the drudgery of business a never ending pleasure is a determination that every stroke shall count, to miss no chances, and to win with plenty of margin to spare."

### *Pleased with a Sample Copy.*

TO THE INDIA RUBBER WORLD—*Gentlemen*: We have received your sample copy, and think you are publishing a very good paper. You may place our name on your subscription list. Yours truly,

CO.

Fort Wayne, Indiana, May 9, 1905.

### *A Rubber Man's Library.*

THE record formed by the set of fifteen bound volumes comprising the issues of this Journal since 1889 is unquestionably the fullest and most complete history of the India-rubber and allied trades, not only within the period named, but in the past, since many articles have been published in relation to the beginnings of the rubber interest. There is also involved a vast amount of information of practical value to the worker in rubber, in whatever branch. This set of volumes, therefore, is essentially a rubber man's library of the highest value.

### SPECIAL NOTICE.

HARD RUBBER—Wanted a position as Superintendent by a man of unquestionable ability in the manufacturing of all kinds of Hard Rubber goods. Have all up-to-date compounds, and thoroughly understand the business from start to finish; long experience and best of references from last employer, also customers. Address COMPETENT, care of THE INDIA RUBBER WORLD.

[784]

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# Small Advertisement Department.

## SITUATIONS OPEN.

**CALENDER MAN.**—Wanted, a first class Calender man, for a Rubber Shoe factory; must have plenty of experience and be able to furnish compounds and understand thoroughly, systems used in connection with this department. Fine opportunity for the right man. Address **CALENDER MAN**, care of **THE INDIA RUBBER WORLD**. [755]

**FOREMAN.**—Wanted thoroughly competent and up-to date Foreman for Hose Department. One who has had good training and thoroughly understands the work as done in the best factories. State experience, plants worked in, age, and other information bearing on the subject. Address **W. A. N.**, care of **THE INDIA RUBBER WORLD**. [776]

**WANTED.**—Capable man to take charge of Cotton Hose Department; one familiar with repairing looms and lining hose. Give make of looms familiar with, and all particulars. Address **COTTON HOSE**, care of **THE INDIA RUBBER WORLD**. [773]

**WANTED.**—Man who thoroughly understands vulcanizing Hard Rubber; must be capable of making material for paper machinery. Address **A.**, care of **THE INDIA RUBBER WORLD**. [774]

**WANTED.** by an up-to-date Mechanical Rubber Mill, steady, reliable, and competent Calender Men, Lathe Men, and Men familiar with the making of small work. State age, name shops worked in, and the particular work most familiar with. Address **RUBBER MANUFACTURER**, care of **THE INDIA RUBBER WORLD**. [775]

## SITUATION OPEN IN EUROPE.

**WANTED.** by one of the most important India-rubber factories on the continent of Europe, a person who is thoroughly and practically acquainted with the **INDIA-RUBBER SHOE MANUFACTURING** in all details, as well as with all modern machines and appliances, mixings, workings, vulcanizing and connected with same. The appointment can be either one with a high salary, or for a certain period and remuneration as desired. Only those who are thoroughly competent will be entertained.

Replies will be treated as strictly confidential. Apply **V 1663 C**, **HAASEN-STEIN & VOGLER A.-G.**, Berlin W. 8, Germany. [772]

## SITUATIONS WANTED.

**CALENDER MAN** is open for a position; 14 years' experience in Druggists' Sundries line; have many good compounds. Address **C. R. N.**, care of **THE INDIA RUBBER WORLD**. [782]

**PRACTICAL SUPERINTENDENT.**—Wanted position as Superintendent with reliable firm in the Mechanical line, where honest effort and a disposition to hustle and attain best results will be appreciated. 20 years' experience in all branches of Tires and Sundries. Address **EXECUTIVE**, care of **THE INDIA RUBBER WORLD**. [762]

**YOUNG MAN** would like to form connection with large manufacturing or wholesale Rubber House. Have had several years experience in the manufacturing of Druggists' and Mechanical goods; also familiar with formulas and costs, and have good executive ability. Address **K.**, care of **THE INDIA RUBBER WORLD**. [783]

## BUSINESS OPPORTUNITY.

A **GERMAN HOUSE** established for more than ten years in the sale of American Rubber Footwear, and now holding the agency of the United States Rubber Co., is open to accept the Representation of American manufacturers of Rubber Novelties, such as may be carried in connection with the goods now handled. Address **EKERT BROTHERS**, bei den Muhren 48, Hamburg, Germany. [781]

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**FOR SALE.**—First-class Cement Churns or Mixers at half value. Address **JOSEPH WHITNEY**, 48 North Front St., Philadelphia, Pa. [680]

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**WANTED.**—Second hand three roll Calender for stock purposes. Must be in good condition. Give name of manufacturer, how old, purposes for which it has been used, condition it is in, and price wanted. Address **C. A. L.**, care of **THE INDIA RUBBER WORLD**. [777]

**WANTED.**—A large Hydraulic Press, from 15 to 30 ft. long, and preferably from 50" wide to 72" wide. State the age of same, name of maker, number and diameter of rams, hydraulic pressure guaranteed to work under, describe general condition, and where same can be seen. Address **H. P.**, care of **THE INDIA RUBBER WORLD**. [778]

**WANTED.**—Small Grinder, Washer, and Calender. State condition, size, and prices. Address **J. C. S.**, care of **THE INDIA RUBBER WORLD**. [779]

## FACTORY WANTED.

**FACTORY** wanted suitable for rubber manufacture. Plenty of water, railroad siding, either equipped or not. Will lease with privilege of buying. Address **J.**, care of **THE INDIA RUBBER WORLD**. [780]

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**THE COLORADO RUBBER PLANT.** BY **O. J. KENNEDY**, SECRETARY Salida Board of Trade, Salida, Colorado; 1904. [Pamphlet. 8vo. Pp. 16. Price 25 cents.]

**A HISTORY** of the discovery of the plant; information as to its culture, growth, and profits. [766]

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Mechanical Rubber Co., Chicago.  
New York Belting & Packing Co., N. Y.  
Republic Rubber Co., Youngstown, O.  
Revere Rubber Co., Boston-New York.

### "Dods" Packing.

Bowers Rubber Co., San Francisco, Cal.

### Door Springs.

Hodgman Rubber Co., New York.

### Dredging Sleeves.

Boston Belting Co., Boston-New York.  
Boston Woven Hose & Rubber Co.  
B. F. Goodrich Co., Akron, O.  
Home Rubber Co., Trenton, N. J.  
N. J. Car Spring & Rubber Co., Jersey City.  
Republic Rubber Co., Youngstown, O.

### Fleshing Bands.

Republic Rubber Co., Youngstown, O.

### Force Cups.

Hodgman Rubber Co., New York.

"Forsyth" Combination Packing.  
Boston Belting Co., Boston-New York.

### Fruit Jar Rings.

Boston Woven Hose & Rubber Co.  
Canadian Rubber Co. of Montreal.  
Cleveland Rubber Co., Cleveland, O.  
B. F. Goodrich Co., Akron, O.  
Empire Rubber Mfg. Co., Trenton, N. J.  
Eureka Rubber Mfg. Co. of Trenton.  
Manhattan Rubber Mfg. Co., New York.  
Republic Rubber Co., Youngstown, Ohio.  
New York Belting & Packing Co., N. Y.

### Fuller Balls.

B. F. Goodrich Co., Akron, O.  
N. J. Car Spring & Rubber Co., Jersey City.



## RUBBER BUYERS' DIRECTORY—CONTINUED.

## MECHANICAL GOODS.

## Futler Balls—Continued.

Peerless Rubber Mfg. Co., New York.  
Revere Rubber Co., Jersey City.

## Gage Glass Washers.

Boston Belting Co., Boston, Mass.  
Canadian Rubber Co., Montreal.  
Cleveland Rubber Co., Cleveland, O.  
Empire Rubber Mfg. Co., Trenton, N. J.  
Home Rubber Co., Trenton, N. J.  
Liverpool Rubber Co., Liverpool, Eng.  
Manhattan Rubber Mfg. Co., New York.  
Mechanical Rubber Co., Chicago, Ill.  
N. J. Car Spring & Rubber Co., Jersey City, N. J.  
New York Belting & Packing Co., N. Y.  
New York Rubber Co., New York.  
Revere Rubber Co., Boston, Mass.  
Jos. Stokes Rubber Co., Trenton, N. J.  
Voorhees Rubber Mfg. Co., Jersey City, N. J.

## Gas-Bags (Rubber).

Canadian Rubber Co., Montreal.  
Cleveland Rubber Co., Cleveland, O.  
Davidson Rubber Co., Providence, R. I.  
B. F. Goodrich Co., Akron, O.  
Liverpool Rubber Co., Liverpool, Eng.  
N. J. Car Spring & Rubber Co., Jersey City, N. J.  
Peerless Rubber Mfg. Co., New York.  
Tyer Rubber Co., Andover, Mass.  
Voorhees Rubber Mfg. Co., Jersey City.

## Gasket Tubing.

Canadian Rubber Co., Montreal.  
Jenkins Bros., New York.

## Hat Bags.

Boston Belting Co., Boston.  
Canadian Rubber Co., Montreal.  
Home Rubber Co., Trenton, N. J.  
Manhattan Rubber Mfg. Co., New York.  
Mattson Rubber Co.  
Mechanical Rubber Co., Chicago.  
N. J. Car Spring & Rubber Co., Jersey City, N. J.  
New York Belting & Packing Co., N. Y.  
New York Rubber Co., New York.  
Peerless Rubber Mfg. Co., New York.  
Republic Rubber Co., Youngstown, O.  
Revere Rubber Co., Boston.

## Horse Shoe Pads.

Canadian Rubber Co., Montreal.  
Home Rubber Co., Trenton, N. J.  
Peerless Rubber Mfg. Co., New York.  
Plymouth Rubber Co., Stoughton, Mass.  
Revere Rubber Co., Boston-New York.  
Voorhees Rubber Mfg. Co., Jersey City.

## Hose—Armored.

## Hose—Wire Wound.

Boston Belting Co., Boston-New York.  
Boston Woven Hose & Rubber Co.  
Canadian Rubber Co., Montreal.  
B. F. Goodrich Co., Akron, O.  
N. J. Car Spring & Rubber Co., Jersey City.  
Peerless Rubber Mfg. Co., New York.  
Republic Rubber Co., Youngstown, O.  
Revere Rubber Co., Boston-New York.  
Voorhees Rubber Mfg. Co., Jersey City.

## Hose Couplings and Fittings.

Boston Woven Hose & Rubber Co.  
Canadian Rubber Co., Montreal.

## Hose Linings.

Boston Belting Co., Boston-New York.  
Boston Woven Hose & Rubber Co.  
Empire Rubber Mfg. Co., Trenton, N. J.  
Eureka Rubber Mfg. Co., Trenton, N. J.  
N. J. Car Spring & Rubber Co., Jersey City, N. J.  
Peerless Rubber Mfg. Co., New York.

## Hose—Protected.

Boston Belting Co., Boston-New York.  
Revere Rubber Co., Boston-New York.  
Voorhees Rubber Mfg. Co., Jersey City.

## Hose Racks and Reels.

Wirt & Knox Mfg. Co., Philadelphia.

## Hose Rubber Lined.

Boston Belting Co., Boston-New York.  
Revere Rubber Co., Boston-New York.

## MECHANICAL GOODS.

## Hose Rubber Lined—Continued.

Canadian Rubber Co., Montreal.  
Cleveland Rubber Co., Cleveland, O.  
Empire Rubber Mfg. Co., Trenton, N. J.  
Eureka Fire Hose Co., New York.  
Eureka Rubber Mfg. Co., Trenton.  
B. F. Goodrich Co., Akron, O.  
Gutta Percha & Rubber Mfg. Co., N. Y.  
Gutta Percha and Rubber Mfg. Co. of Toronto.  
Home Rubber Co., Trenton, N. J.  
Manhattan Rubber Mfg. Co., New York.  
N. J. Car Spring & Rubber Co., Jersey City, N. J.  
New York Belting & Packing Co., N. Y.  
Peerless Rubber Mfg. Co., New York.  
Republic Rubber Co., Youngstown, O.  
Revere Rubber Co., Boston.  
Jos. Stokes Rubber Co., Trenton, N. J.  
Voorhees Rubber Mfg. Co., Jersey City.

## Hose—Submarine.

Boston Belting Co., Boston-New York.  
B. F. Goodrich Co., Akron, O.  
Republic Rubber Co., Youngstown, O.

## "Jenkins '96" Packing.

Jenkins Bros., New York.

## Lawn Sprinklers.

Boston Woven Hose & Rubber Co.  
Canadian Rubber Co., Montreal.

## Mallets (Rubber).

Boston Belting Co., Boston-New York.  
B. F. Goodrich Co., Akron, O.  
Peerless Rubber Mfg. Co., New York.  
Revere Rubber Co., Boston-New York.

## Mould Work.

[See Mechanical Rubber Goods.]

Davidson Rubber Co., Boston.  
Daval Rubber Co., Providence, R. I.  
Faultless Rubber Co., Akron, O.  
Hardman Rubber Co., Belleville, N. J.  
Hodgman Rubber Co., New York.  
La Crosse (Wis.) Rubber Mills Co.  
Mattson Rubber Co., New York.  
Mitzel Rubber Co., Akron, O.  
National India Rubber Co., Bristol, R. I.  
Plymouth Rubber Co., Stoughton, Mass.  
Tyer Rubber Co., Andover, Mass.

## "Nubian" Packing.

Voorhees Rubber Mfg. Co., Jersey City.

## Oil Well Supplies.

Boston Belting Co., Boston-New York.  
Boston Woven Hose & Rubber Co.  
B. F. Goodrich Co., Akron, O.  
Home Rubber Co., Trenton, N. J.  
Lake Shore Rubber Co., Erie, Pa.  
N. J. Car Spring & Rubber Co., Jersey City.  
Peerless Rubber Mfg. Co., New York.  
Republic Rubber Co., Youngstown, O.  
Revere Rubber Co., Boston-Pittsburgh.  
Voorhees Rubber Mfg. Co., Jersey City.

## Paper Machine Rollers.

Boston Belting Co., Boston-New York.  
B. F. Goodrich Co., Akron, O.  
Republic Rubber Co., Youngstown, O.  
Revere Rubber Co., Boston-New York.  
Peerless Rubber Mfg. Co., New York.  
Voorhees Rubber Mfg. Co., Jersey City.

## "Perfection" Belting.

Boston Woven Hose & Rubber Co.

## Plumbers' Supplies.

Canadian Rubber Co., Montreal.  
B. F. Goodrich Co., Akron, O.  
Republic Rubber Co., Youngstown, O.

## Pump Valves.

[See Mechanical Rubber Goods.]

Jenkins Bros., New York.

## "Rainbow" Packing.

Peerless Rubber Mfg. Co., New York.

## Rings.

Boston Belting Co., Boston-New York.  
B. F. Goodrich Co., Akron, O.  
Peerless Rubber Mfg. Co., New York.  
Plymouth Rubber Co., Stoughton, Mass.  
Republic Rubber Co., Youngstown, O.

## MECHANICAL GOODS.

## Rollers—Rubber Covered.

Boston Belting Co., Boston.  
Canadian Rubber Co., Montreal.  
Cleveland Rubber Co., Cleveland, O.  
Empire Rubber Mfg. Co., Trenton, N. J.  
Eureka Rubber Mfg. Co., Trenton.  
B. F. Goodrich Co., Akron, O.  
Home Rubber Co., Trenton, N. J.  
Manhattan Rubber Mfg. Co., New York.  
Mechanical Rubber Co., Chicago.  
N. J. Car Spring & Rubber Co., Jersey City, N. J.  
New York Belting & Packing Co., N. Y.  
Peerless Rubber Mfg. Co., New York.  
Plymouth Rubber Co., Stoughton, Mass.  
Republic Rubber Co., Youngstown, O.  
Revere Rubber Co., Boston-New York.

## Sewing Machine Rubbers.

B. F. Goodrich Co., Akron, O.

## Springs—Rubber.

Boston Belting Co., Boston-New York.  
Canadian Rubber Co., Montreal.  
B. F. Goodrich Co., Akron, O.  
Hardman Rubber Co., Belleville, N. J.  
Liverpool Rubber Co., Liverpool, Eng.  
N. J. Car Spring & Rubber Co., Jersey City.  
Peerless Rubber Mfg. Co., New York.  
Plymouth Rubber Co., Stoughton, Mass.  
Republic Rubber Co., Youngstown, Ohio.  
Revere Rubber Co., Boston-New York.  
Voorhees Rubber Mfg. Co., Jersey City.

## Stair Treads.

Boston Belting Co., Boston-New York.  
Boston Woven Hose & Rubber Co.  
Canadian Rubber Co., Montreal.  
Cleveland Rubber Co., Cleveland, O.  
Empire Rubber Mfg. Co., Trenton, N. J.  
Home Rubber Co., Trenton, N. J.  
Liverpool Rubber Co., Liverpool, Eng.  
Manhattan Rubber Mfg. Co., New York.  
N. J. Car Spring & Rubber Co., Jersey City, N. J.  
New York Belting & Packing Co., N. Y.  
New York Rubber Co., New York.  
Peerless Rubber Mfg. Co., New York.  
Republic Rubber Co., Youngstown, O.  
Revere Rubber Co., Boston-New York.  
Voorhees Rubber Mfg. Co., Jersey City.

Mechanical Fabric Co., Providence, R. I.  
Revere Rubber Co., Boston.

## Tiling.

Canadian Rubber Co., Montreal.  
B. F. Goodrich Co., Akron, O.  
Gutta Percha & Rubber Mfg. Co., N. Y.  
N. J. Car Spring & Rubber Co., Jersey City.  
New York Belting & Packing Co., N. Y.  
Peerless Rubber Mfg. Co., New York.  
Republic Rubber Co., Youngstown, Ohio.  
Voorhees Rubber Mfg. Co., Jersey City.

## Tires.

AUTOMOBILE, BICYCLE, AND CARRIAGE.  
Canadian Rubber Co., Montreal.  
Continental Caoutchouc & Guttapercha Co., Hanover.  
Empire Rubber Mfg. Co., Trenton, N. J.  
B. F. Goodrich Co., Akron, O.  
Gutta Percha & Rubber Mfg. Co., Toronto.  
Kokomo Rubber Co., Kokomo, Ind.  
Lake Shore Rubber Co., Erie, Pa.  
Liverpool Rubber Co., Liverpool, Eng.  
North British Rubber Co., Ltd., Edinburgh.  
Plymouth Rubber Co., Stoughton, Mass.  
Republic Rubber Co., Youngstown, O.  
AUTOMOBILE AND CARRIAGE.  
Boston Belting Co., Boston-New York.  
Revere Rubber Co., Boston-New York.  
Eureka Rubber Mfg. Co., Trenton, N. J.  
Springfield Tire & Rubber Co., Springfield, Ohio.

## Truck Bands.

Boston Belting Co., Boston.  
Cleveland Rubber Co., Cleveland, O.  
Empire Rubber Mfg. Co., Trenton, N. J.  
B. F. Goodrich Co., Akron, O.  
Home Rubber Co., Trenton, N. J.  
Manhattan Rubber Mfg. Co., New York.  
Mechanical Rubber Co., Chicago.  
N. J. Car Spring & Rubber Co., Jersey City, N. J.

## MECHANICAL GOODS.

## Truck Bands—Continued.

New York Belting & Packing Co., N. Y.  
Peerless Rubber Mfg. Co., New York.  
Republic Rubber Co., Youngstown, O.  
Voorhees Rubber Mfg. Co., Jersey City.

## Tubing.

[See Mechanical Rubber Goods.]

American Hard Rubber Co., New York.  
Davidson Rubber Co., Boston.  
Daval Rubber Co., Providence, R. I.  
Hardman Rubber Co., Belleville, N. J.  
Plymouth Rubber Co., Stoughton, Mass.  
Tyer Rubber Co., Andover, Mass.

## Tubing (Beer).

Boston Belting Co., Boston-New York.  
Boston Woven Hose & Rubber Co.  
Canadian Rubber Co., Montreal.  
Faultless Rubber Co., Akron, Ohio.  
B. F. Goodrich Co., Akron, O.  
Peerless Rubber Mfg. Co., New York.  
Plymouth Rubber Co., Stoughton, Mass.  
Republic Rubber Co., Youngstown, O.  
Voorhees Rubber Mfg. Co., Jersey City.

## "Usudurian" Packing.

Revere Rubber Co., Boston-New York.

## Valve Balls.

Boston Belting Co., Boston.  
Cleveland Rubber Co., Cleveland, O.  
Manhattan Rubber Mfg. Co., New York.  
Mechanical Rubber Co., Chicago.  
New York Belting & Packing Co., N. Y.  
New York Rubber Co., New York.  
Peerless Rubber Mfg. Co., New York.  
Republic Rubber Co., Youngstown, O.

## Valve Discs.

American Hard Rubber Co., New York.  
Boston Belting Co., Boston-New York.  
B. F. Goodrich Co., Akron, O.  
Peerless Rubber Mfg. Co., New York.  
Republic Rubber Co., Youngstown, O.  
Revere Rubber Co., Boston-New York.

## Valves.

[See Mechanical Rubber Goods.]  
Jenkins Bros., New York-Chicago.  
Plymouth Rubber Co., Stoughton, Mass.

## Wringer Rolls.

Canadian Rubber Co., Montreal.  
Cleveland Rubber Co., Cleveland, O.  
B. F. Goodrich Co., Akron, O.  
Home Rubber Co., Trenton, N. J.  
Republic Rubber Co., Youngstown, O.

## DRUGGISTS' AND STATIONERS' SUNDRIES

## Atomizers.

## Bandages.

## Bulbs.

## Syringes.

## Water Bottles.

## Druggists' Sundries—General.

American Hard Rubber Co., New York.  
C. J. Bailey & Co., Boston.  
Geo. Borgfeldt & Co., New York.  
Boston Woven Hose & Rubber Co.  
Canadian Rubber Co., Montreal.  
Cleveland Rubber Co., Cleveland, O.  
Davidson Rubber Co., Boston.  
Daval Rubber Co., Providence, R. I.  
Faultless Rubber Co., Akron, O.  
B. F. Goodrich Co., Akron, O.  
Hanover Rubber Co., Hanover, Germany.  
Hardman Rubber Co., Belleville, N. J.  
Hodgman Rubber Co., New York.  
Mitzel Rubber Co., Akron, O.  
North British Rubber Co., Ltd., Edinburgh.  
Tyer Rubber Co., Andover, Mass.  
Balls, Dolls and Toys.  
Geo. Borgfeldt & Co., New York.  
Canadian Rubber Co., Montreal.  
Continental Caoutchouc & Guttapercha Co.  
B. F. Goodrich Co., Akron, O.  
Hanover Rubber Co., Hanover, Germany.  
New York Rubber Co., New York.



## RUBBER BUYERS' DIRECTORY—CONTINUED.

## DRUGGISTS' SUNDRIES

## Combs.

American Hard Rubber Co., New York.  
Geo. Borgfeldt & Co., New York.  
Hanover Rubber Co., Hanover, Germany.

## Elastic Bands.

Canadian Rubber Co. of Montreal.  
Davidson Rubber Co., Boston.  
Davol Rubber Co., Providence, R. I.  
B. F. Goodrich Co., Akron, O.  
Hodgman Rubber Co., New York-Boston.  
Tyer Rubber Co., Andover, Mass.  
Whitman & Barnes Mfg. Co., Akron, O.

## Erasive Rubbers.

Davidson Rubber Co., Boston.  
B. F. Goodrich Co., Akron, O.  
Hardman Rubber Co., Belleville, N. J.  
Mattson Rubber Co., New York.

## Finger Cots.

Faultless Rubber Mfg. Co., Akron, O.  
B. F. Goodrich Co., Akron, O.  
Pure Gum Specialty Co., Barberton, O.

## Gloves.

Canadian Rubber Co. of Montreal.  
Davol Rubber Co., Providence, R. I.  
Faultless Rubber Co., Akron, O.  
B. F. Goodrich Co., Akron, O.  
Pure Gum Specialty Co., Barberton, O.

## Hard Rubber Goods.

American Hard Rubber Co., New York.  
Geo. Borgfeldt & Co., New York.  
Canadian Rubber Co. of Montreal.  
Davol Rubber Co., Providence, R. I.  
Hanover Rubber Co., Hanover, Germany.  
Hardman Rubber Co., Belleville, N. J.  
Stokes Rubber Co., Joseph, Trenton, N. J.  
Tyer Rubber Co., Andover, Mass.

## Hospital Sheetings.

Cleveland Rubber Co., Cleveland, O.  
Davidson Rubber Co., Boston.  
Davol Rubber Co., Providence, R. I.  
Hodgman Rubber Co., New York.  
Plymouth Rubber Co., Stoughton, Mass.  
Tyer Rubber Co., Andover, Mass.

## Hot Water Bottles.

[See Water Bottles.]

## Ice Bags and Ice Caps.

Faultless Rubber Co., Akron, Ohio.  
B. F. Goodrich Co., Akron, O.  
Hardman Rubber Co., Belleville, N. J.  
Pure Gum Specialty Co., Barberton, O.  
Tyer Rubber Co., Andover, Mass.

## Life Preservers.

Hodgman Rubber Co., New York.

## Nipples.

Canadian Rubber Co. of Montreal.  
Cleveland Rubber Co., Cleveland, O.  
Davidson Rubber Co., Boston.  
Davol Rubber Co., Providence, R. I.  
Faultless Rubber Co., Akron, O.  
B. F. Goodrich Co., Akron, O.  
Pure Gum Specialty Co., Barberton, O.  
Tyer Rubber Co., Andover, Mass.

## Sponges (Rubber).

Faultless Rubber Co., Ashland, Ohio.  
B. F. Goodrich Co., Akron, O.

## Stationers' Sundries.

American Hard Rubber Co., New York.  
Geo. Borgfeldt & Co., New York.  
Boston Woven Hose & Rubber Co.  
Canadian Rubber Co. of Montreal.  
Cleveland Rubber Co., Cleveland, O.  
Davidson Rubber Co., Boston.  
Davol Rubber Co., Providence, R. I.  
Faultless Rubber Co., Akron, O.  
B. F. Goodrich Co., Akron, O.  
Hanover Rubber Co., Hanover, Germany.  
Hardman Rubber Co., Belleville, N. J.  
Hodgman Rubber Co., New York-Boston.  
Tyer Rubber Co., Andover, Mass.

## Stopples (Rubber).

Cleveland Rubber Co., Cleveland, O.  
Davol Rubber Co., Providence, R. I.  
Manhattan Rubber Co., New York.  
New York Belting & Packing Co., N. Y.  
Tyer Rubber Co., Andover, Mass.

## DRUGGISTS' SUNDRIES.

## Throat Bags.

Cleveland Rubber Co., Cleveland, O.  
Davol Rubber Co., Providence, R. I.  
B. F. Goodrich Co., Akron, O.  
Tyer Rubber Co., Andover, Mass.

## Tobacco Pouches.

Canadian Rubber Co. of Montreal.  
Faultless Rubber Co., Akron, Ohio.  
B. F. Goodrich Co., Akron, O.  
Pure Gum Specialty Co., Barberton, O.  
Tyer Rubber Co., Andover, Mass.

MACKINTOSHED  
AND SURFACE  
GOODS

## Air Goods (Rubber).

Canadian Rubber Co. of Montreal.  
Cleveland Rubber Co., Cleveland, O.  
Davol Rubber Co., Providence, R. I.  
B. F. Goodrich Co., Akron, O.  
Hodgman Rubber Co., New York.  
New York Rubber Co., New York.  
National India Rubber Co., Providence.  
Tyer Rubber Co., Andover, Mass.

## Air Mattresses.

Canadian Rubber Co. of Montreal.  
Mechanical Fabric Co., Providence, R. I.

## Barbers' Bibs.

Davol Rubber Co., Providence, R. I.  
Tyer Rubber Co., Andover, Mass.

## Bathing Caps.

Davol Rubber Co., Providence, R. I.  
B. F. Goodrich Co., Akron, O.

## Bellows Cloths.

Boston Rubber Co., Boston.  
Cleveland Rubber Co., Cleveland, O.  
Hodgman Rubber Co., New York.  
La Crosse (Wis.) Rubber Mills Co.

## Calendering.

La Crosse (Wis.) Rubber Mills Co.  
Plymouth Rubber Co., Stoughton, Mass.

## Carriage Ducks and Drills.

Cleveland Rubber Co., Cleveland, O.  
Empire Rubber Mfg. Co., Trenton, N. J.  
Kureka Rubber Mfg. Co. of Trenton.  
Gutta Percha & Rubber Mfg. Co., Toronto.

## Clothing.

Apsley Rubber Co., Hudson, Mass.  
Canadian Rubber Co. of Montreal.  
Cleveland Rubber Co., Cleveland, O.  
Granby Rubber Co., Granby, Quebec.  
Gutta Percha & Rubber Mfg. Co. of Toronto.  
Hodgman Rubber Co., New York.  
La Crosse (Wis.) Rubber Mills Co.  
North British Rubber Co., Ltd., Edinburgh.

## Cravenette.

Cravenette Co., Ltd.

## Diving Dresses.

Hodgman Rubber Co., New York.

## Dress Shields.

Hodgman Rubber Co., New York.  
Mattson Rubber Co., New York.

## Horse Covers.

Hodgman Rubber Co., New York.

## Leggings.

Cleveland Rubber Co., Cleveland, O.  
Hodgman Rubber Co., New York.

## Mackintoshes.

[See Clothing.]

## Proofing.

Canadian Rubber Co. of Montreal.  
La Crosse (Wis.) Rubber Mills Co.  
Plymouth Rubber Co., Stoughton, Mass.

## MACKINTOSHED GOODS.

## Rain Coats.

Cravenette Co., Ltd.

## Rubber Coated Cloths.

Mechanical Fabric Co., Providence, R. I.

RUBBER  
FOOTWEAR

## Boots and Shoes.

American Rubber Co., Boston.  
Boston Rubber Shoe Co., Boston.  
Canadian Rubber Co. of Montreal.  
L. Candee & Co., New Haven, Ct.  
Granby Rubber Co., Granby, Quebec.  
Gutta Percha & Rubber Mfg. Co. of Toronto.  
Hood Rubber Co., Boston.  
Liverpool Rubber Co., Liverpool, Eng.  
Lycorning Rubber Co., Williamsport, Pa.  
Meyer Rubber Co., New York.  
National India Rubber Co., Boston.  
North British Rubber Co., Ltd., Edinburgh.  
United States Rubber Co., New York.  
Wales-Goodyear Rubber Co., Boston.  
Woonsocket Rubber Co., Providence.

## Heels and Soles.

Boston Woven Hose & Rubber Co.  
Canadian Rubber Co. of Montreal.  
Continental Caoutchouc & Gutta-percha Co., Hanover.  
Plymouth Rubber Co., Stoughton, Mass.  
Springfield Tire & Rubber Co., Springfield, Ohio.

## Tennis Shoes.

American Rubber Co., Boston.  
Boston Rubber Shoe Co., Boston.  
Granby Rubber Co., Granby, Quebec.  
Liverpool Rubber Co., Liverpool, Eng.  
National India Rubber Co., Providence.  
United States Rubber Co., New York.

## Tennis Soles.

Canadian Rubber Co. of Montreal.  
Jos. Stokes Rubber Co., Trenton, N. J.

## Wading Pants.

Canadian Rubber Co. of Montreal.  
Hodgman Rubber Co., New York.

SPORTING  
GOODS

## Foot Balls.

Canadian Rubber Co. of Montreal.  
Cleveland Rubber Co., Cleveland, O.  
Faultless Rubber Co., Akron, Ohio.  
B. F. Goodrich Co., Akron, O.  
Hodgman Rubber Co., New York.

## Golf Balls.

Boston Belting Co., Boston.  
Canadian Rubber Co. of Montreal.  
Davidson Rubber Co., Boston.  
B. F. Goodrich Co., Akron, O.  
Whitman & Barnes Mfg. Co., Akron, O.

## Submarine Outfits.

Hodgman Rubber Co., New York.

## Sporting Goods.

Canadian Rubber Co. of Montreal.  
Faultless Rubber Co., Akron, Ohio.  
B. F. Goodrich Co., Akron, O.  
Hodgman Rubber Co., New York.  
Tyer Rubber Co., Andover, Mass.

## Striking Bags.

Canadian Rubber Co. of Montreal.  
Faultless Rubber Co., Akron, Ohio.  
B. F. Goodrich Co., Akron, O.  
Pure Gum Specialty Co., Barberton, O.

DENTAL AND  
STAMP RUBBER

## Dental Gum.

American Hard Rubber Co., New York.  
Cleveland Rubber Co., Cleveland, O.  
Tyer Rubber Co., Andover, Mass.

## DENTAL AND STAMP RUBBER

## Rubber Dam.

Cleveland Rubber Co., Cleveland, O.  
Davol Rubber Co., Providence, R. I.  
Hodgman Rubber Co., New York.  
Tyer Rubber Co., Andover, Mass.

## Stamp Gum.

Mattson Rubber Co., New York.  
Mechanical Rubber Co., Chicago, Ill.  
N. J. Car Spring & Rubber Co., Jersey City, N. J.  
New York Belting & Packing Co., N. Y.

## ELECTRICAL

## Electrical Supplies.

American Hard Rubber Co., New York.  
Lake Shore Rubber Co., Erie, Pa.  
Joseph Stokes Rubber Co., Trenton, N. J.  
Massachusetts Chemical Co., Boston.  
Tyer Rubber Co., Andover, Mass.

## Friction Tape.

Boston Belting Co., Boston.  
Boston Woven Hose & Rubber Co.  
Canadian Rubber Co. of Montreal.  
Cleveland Rubber Co., Cleveland, O.  
B. F. Goodrich Rubber Co., Akron, O.  
Massachusetts Chemical Co., Boston.  
Mechanical Rubber Co., Chicago.  
Home Rubber Co., Trenton, N. J.  
Revere Rubber Co., Boston-New York.

## Hard Rubber Goods.

American Hard Rubber Co., New York.  
Canadian Rubber Co. of Montreal.  
Joseph Stokes Rubber Co., Trenton, N. J.

## Insulating Compounds.

Canadian Rubber Co. of Montreal.  
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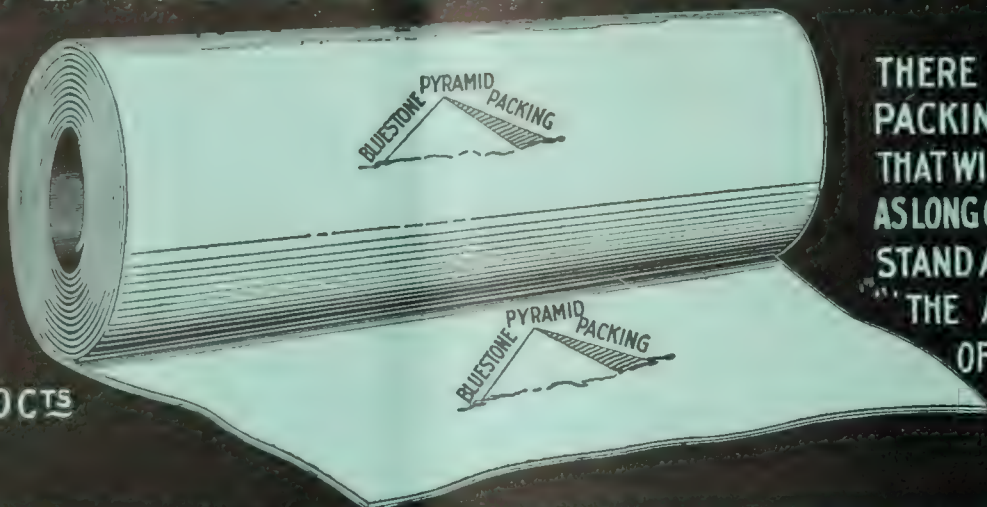
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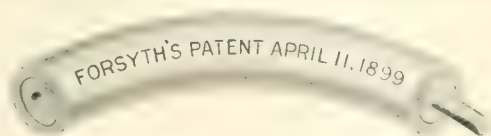
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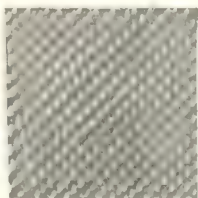
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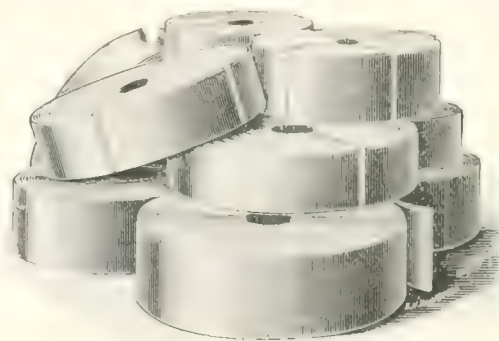
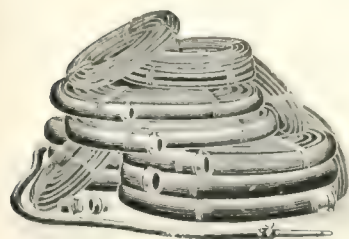
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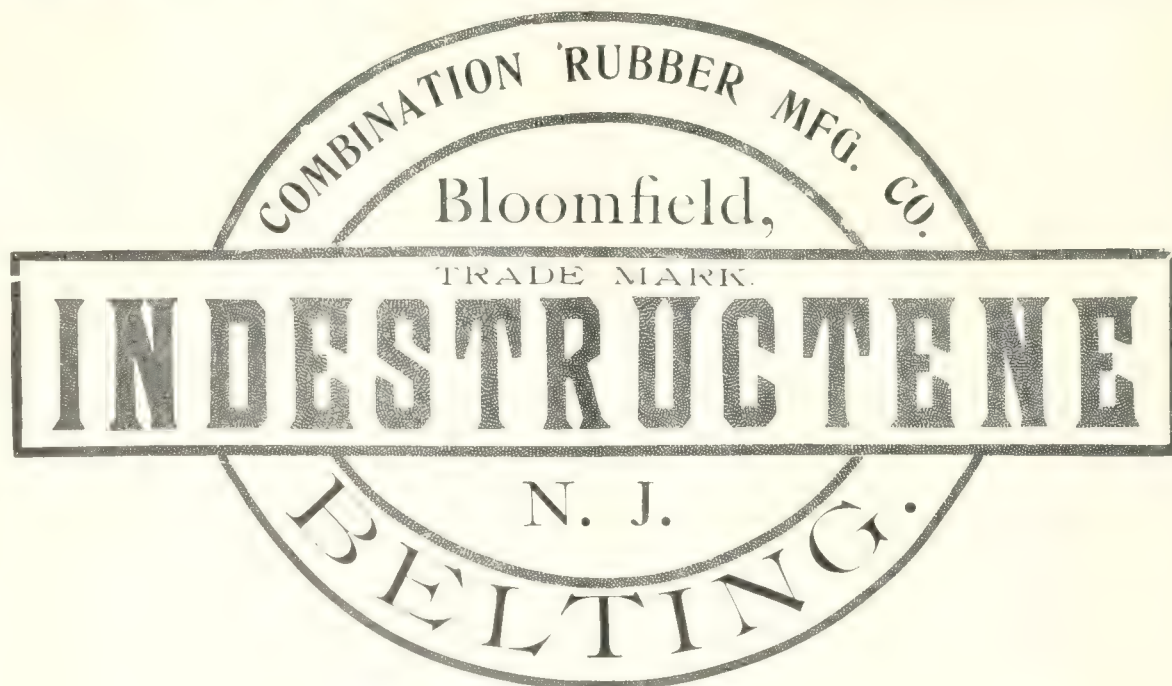
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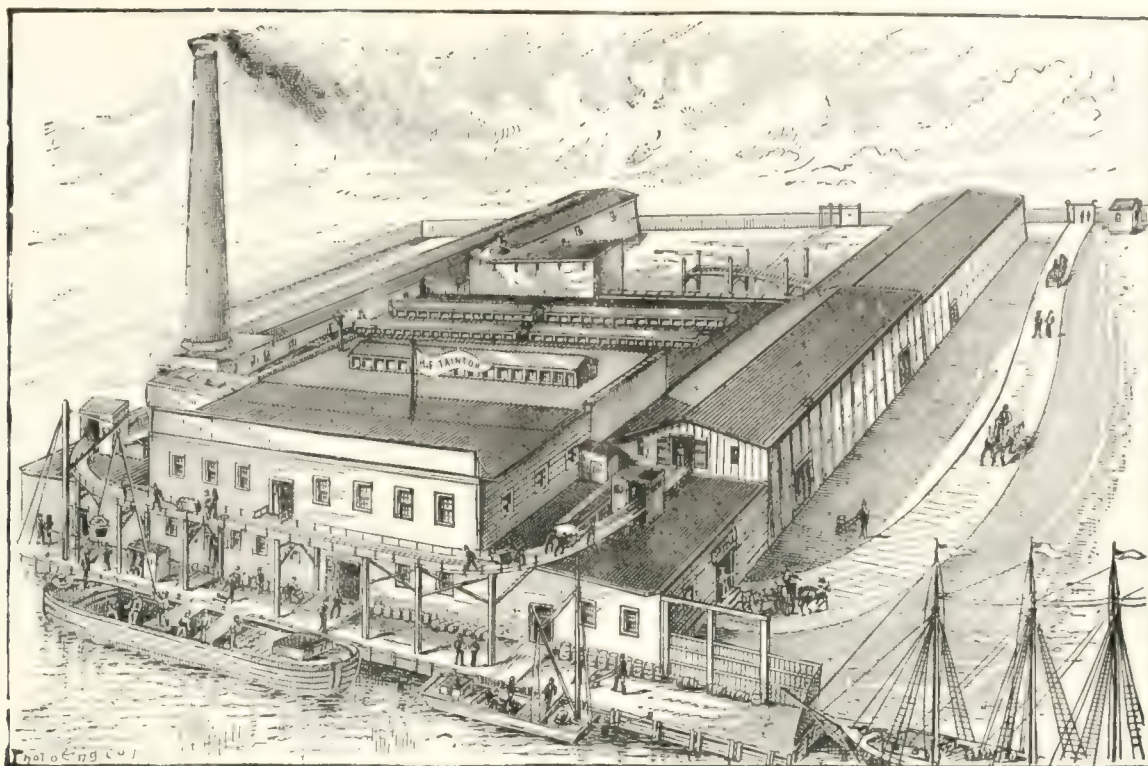
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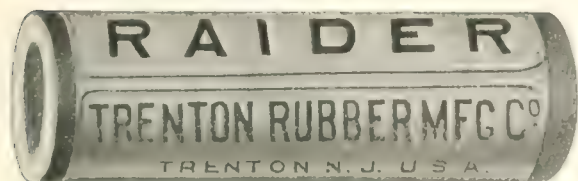
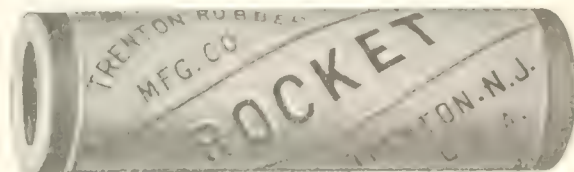
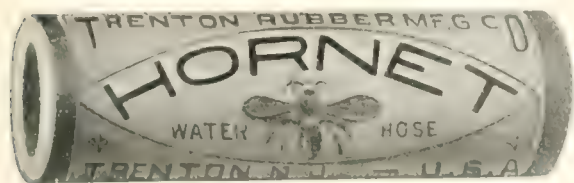
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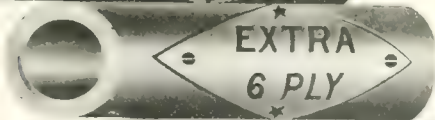
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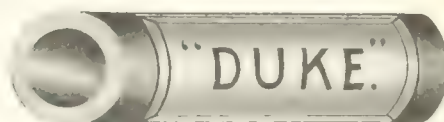
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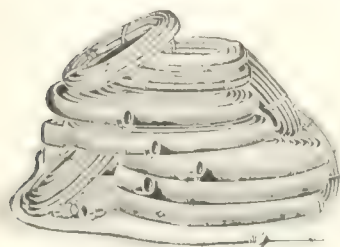
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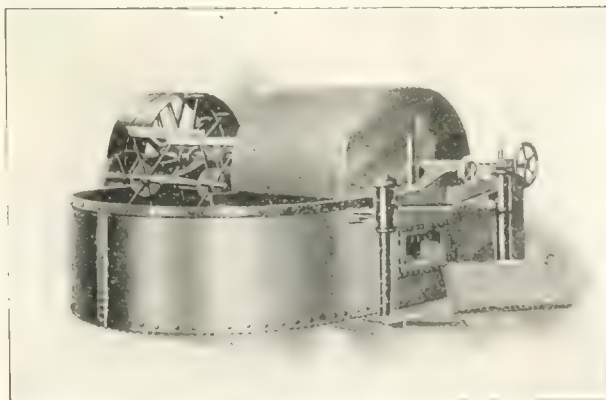
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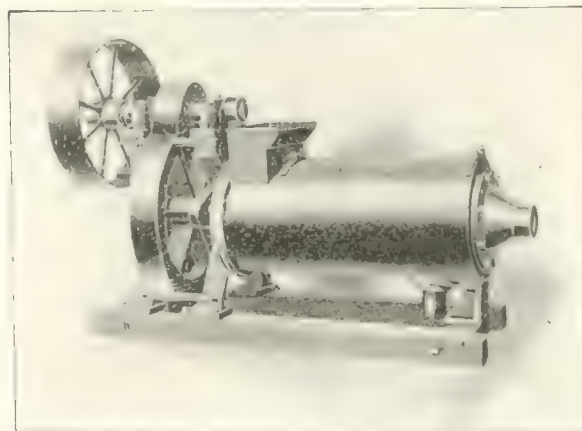
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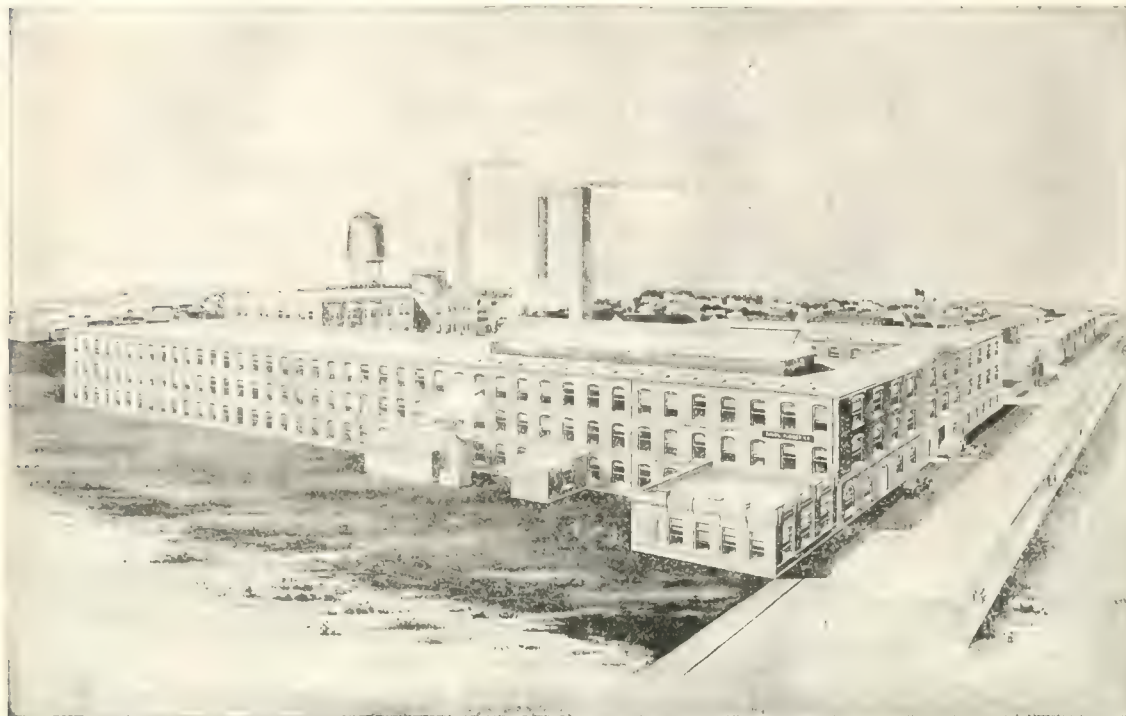
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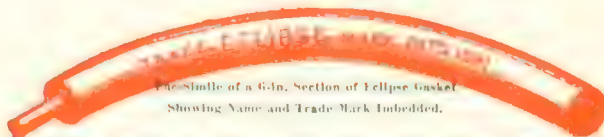


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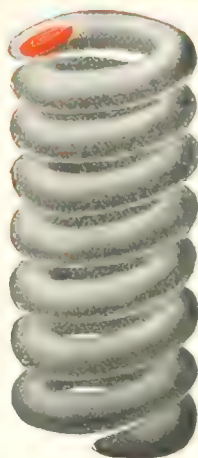


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## IS THIS THE LIMIT OF PRODUCTION?

DURING 1904 the prices obtained for Pará rubber in all the consuming markets not only averaged higher than for any previous twelvemonth, but the range of high prices was persistent, with an almost unbroken advance from January to December. Nor was this situation any just cause for surprise: it had been pointed to by the development of market conditions for months preceding. Moreover, every reason existed for the expectation of still higher prices during the current year, and such prices, as a matter of fact, have prevailed and now prevail. It may be added that those persons, no matter where situated, whose capital supplies the facilities for the marketing of Pará rubber, are never long blind to any conditions of the market for their commodity. It would seem logical, therefore, that the price conditions here outlined should have tended to an increased production of Pará rubber, as compared with previous periods when the proceeds obtainable were only one-half or three-quarters as much as the market quotations during 1904.

Originally all the rubber of the character now described by the term "Pará" was derived from Brazil—at first from the lower reaches of the river Amazon, tributary to the trade of the port of Pará, and extending gradually up to and beyond Manáos, and including all the territory in Brazil drained not only by the Amazon proper, but by its thousands of miles of tributaries. So long as Brazil contributed an annual increase of rubber supplies, little heed was given to any suggestion that a limit of production might ultimately be reached. But certain figures on another page of this Journal, supplied from a Brazilian official source, compel attention to the thought that if such limit has not been reached already, it may be within the early possibilities.

To get down at once to the official figures, the exports of Pará rubber of Brazilian production (including Caucho) during the last four calendar years have been as follows;

Tons .....	1901	1902	1903	1904
	29,373	27,474	29,319	28,792

Is it reasonable to suppose, had the natural supply been unlimited, and the means for marketing rubber likewise capable of constant expansion, that the high price level of 1904 would not have tended to a production as great, at least, as in any former year? It will be noted that the above figures are referred to as embracing the grade of rubber designated as Caucho, which is not "Pará," and while the Brazilian official reports are not informing on this point, THE INDIA RUBBER WORLD is convinced that the Brazilian production of Caucho during the past four years has become larger rather than smaller.

If one more comparison may be allowed, we may point out that all the Brazilian exports covered by the above figures were not made through Amazon ports. In other words, there has been an effort during recent years to develop a trade in "Pará" rubber in regions south of the Amazon whose natural outlet is through other ports than Manáos and Pará. But the official returns do not lend hope that the supply of "Pará" rubber is thus to be main-



tained, not to say enlarged. The following figures tell the story:

	1901	1902	1903	1904
Amazon ports.....	2,104	27,117	29,059	28,505
Southern ports.....	212	357	260	287
Total .....	2,316	27,474	29,319	28,792

Here is not only a reduced total production of "Pará" rubber from Brazil, in spite of advancing prices, but the production of the more southerly districts, from which much at one time was hoped, has declined from the largest figures in the past.

Is there needed a plainer argument for the cultivation of rubber, now that the practicability of cultivation has been demonstrated so amply?

### A MONOPOLY NOT IN SIGHT.

SINCE the great rubber merger that brought the Rubber Goods Manufacturing Co. into the United States Rubber Co., the trade naturally has been on the *qui vive* for further absorption. And as people usually see or think they see just what they are looking for, the air has been full of rumors. Were all of them built on foundations of fact there would be very little in the trade but THE INDIA RUBBER WORLD that would not be under cover.

That certain of the larger manufacturers not in the United States company have been approached with invitations to come in cannot be denied. Whether those who broached the subject represented the company or were sent by minor syndicates that were looking for a good commission is not so apparent.

The fact of such a large amalgamation as that just mentioned necessarily stirs the trade, but were a number of the largest of the outsiders to be absorbed there is no reason to think that it would mean either the absorption or the obliteration of any or all of the remainder. Were it possible to absolutely control the supply of crude rubber the task would be an easy one. But at the present time no such plan is deemed either feasible or possible.

To begin with, the United States, while a most important factor in the market, is not yet the "whole thing." According to reliable figures we consume about 45 per cent. of the year's production. But our money is no more potent than that of England, Germany, or France, and it would be a difficult thing indeed to get a working agreement with the powers abroad that would give added power to an American syndicate.

Again if it is simply a question of purchasing the outsiders, the task is an enormous one. The companies embraced in the United States Rubber Co. now manufacture something like 45 to 50 million dollars worth of goods annually. The United States census of 1900 gives the total value of manufactures of "Rubber Belting and Hose," "Rubber Boots and Shoes," "Rubber and Elastic Goods," and "Insulated Wire" as about \$122,000,000. To this should be added numerous items not separately listed, as rubber clothing, carriage cloth, cements, rubber dress shields, and so on, altogether amounting probably to several millions in value. Those items, with the great increase

in the rubber business that has taken place in the past five years, bring the business well up toward the \$200,000,000 mark with three-quarters of it yet to be consolidated.

Or to look at the problem from another viewpoint: There are some sixty independent companies making mechanical rubber goods and tires to-day—doing a business each from \$50,000 a year up to many millions. There are forty making a variety of goods many of whom do quite a business in the smaller mechanicals such as mold work, packings, etc. There are eleven independent rubber boot and shoe concerns, doing nearly \$20,000,000 of business annually. There are twenty making insulated wire and now turning out nearer 30 than 20 millions worth of goods a year.

It will be seen, therefore, that the problem of absorption is huge, if indeed it is dreamed of by the very able management of the United States Rubber Co.

THE CITY COUNCIL OF BUENA VISTA has taken a step which may prove discouraging to the great rubber interest in Colorado. We refer to the recent ordinance in restraint of spitting in public places. So far as we have been able to learn, the most practicable means of extracting rubber from "rabbit weed" is by chewing the roots—an occupation which may be pursued by any person on the streets, as well as indoors. Such occupation, however, must induce more or less spitting, and if this is to be penalized by heavy fines, thrifty persons who otherwise might be producing rubber constantly will hesitate to chew "rabbit weed" within the limits of Buena Vista.

### NEW TRADE PUBLICATIONS.

THE CANADIAN RUBBER CO., OF MONTREAL, LIMITED, have issued some catalogues of their productions that take high rank as trade publications, as regards both subject matter and appearance. Their Catalogue C is devoted to Druggists' Sundries and also sporting goods and stationers' sundries, the whole comprising an exceptionally complete list of goods. This catalogue is tastefully printed in colors, with a cover handsomely embossed in black and red, and appears to be the best and most complete catalogue of its kind yet issued by any Canadian firm. The illustrations, in half tone, serve excellently to give an idea of the goods described in the book, and this we regard to be the first province of pictures in a manufacturer's catalogue. [5 1/2" x 7 1/2". 86 pages.]

THE VULCANIZED RUBBER CO. (New York) issued under date of May 1, 1905, a new edition of their illustrated price list of Hard Rubber Goods, supplanting that of July 1, 1902. It is not only larger in bulk but includes various new items. Changes are to be noted in the styles of combs, including the addition of the warranted "Ajax" line of unbreakable combs. There are also new items in the list of syringes, and some stationers' goods have been added. This list does not embrace the company's extensive line of electrical supplies. [4 3/4" x 8 3/8". 62 pages.]

THE BOOMER & BOSCHERT PRESS CO. (Syracuse, New York) have issued a new catalogue, in which are illustrated and described a large number of different styles and sizes of hydraulic and other presses of their manufacture. For many years they have devoted special attention to the supplying of presses for rubber work, and they have filled orders probably from every rubber factory of importance in the country, not to mention their trade abroad. [5 1/4" x 8 3/4". 114 pages.]

## A LETTER FROM FRANK DA COSTA.

TO THE EDITOR OF THE INDIA RUBBER WORLD: Being one of the oldest merchants in the rubber trade, having resided in Pará, Brazil, for the last 35 years, always involved in the export of this article, I naturally follow the business with a certain amount of interest and curiosity, which justifies my addressing you these lines, which you may find worth while inserting in your valuable Journal.

For 12 years my firm acted in Pará as agent for Mr. Joseph Banigan, and up to his death I enjoyed all his confidence. Known, as he was, as one of the most aggressive and intelligent manufacturers in the United States, it was a great honor for me. The Hon. E. S. Converse, the large owner of the Boston, Rubber Shoe Co., and one of the most honest men I ever came across, used my services for many years, and if I mention this it is only to give you and your readers an idea that I have had "something to say" in the trade.

One of the recent factors which I have followed with great interest has been the United States Rubber Co.—the Trust, so called. For the first eleven years of its existence the results were not bright, but the last report, published in your June number, shows a more reasonable outturn, to say, having sold about \$32,000,000 of manufactured goods, they made \$3,500,000 profits—say about 11½ per cent. It is not extraordinary, as I believe that either the Boston Rubber Shoe Co. or the Banigan companies, before joining the consolidation, made much more than that, but it nevertheless indicates the efforts of its management in doing better than heretofore. My sincerest congratulations to them.

The worst part of a corporation such as the one I am referring to is the necessity of publishing their figures every year, and therefore of drawing the attention of the public, when there is any large profit in the business. In a country like yours, where wealth is so immense, there will be no lack of funds to build rubber factories when it is known that they can pay good dividends. A big factory can be erected with a relatively small sum, in a very short time, with modern machinery, and modern facilities *à l'Américaine*, and become a very strong competitor for the corporation, whose factories, although of the best, will not be so modern and economical.

Therefore, as you very wisely say in your June editorial, under the heading "The Latest Rubber Merger," a monopoly is impossible, and the mergers may be as many as you like; new competition will always arise, either with the idea of being also merged at a good profit, or of being able to make goods a little cheaper with the modern facilities, if they cannot merge. A man whom I consider one of the able heads in American commerce, whose vast knowledge and capacity I always admired and admire up to this day, made this mistake of believing in the supreme control of the rubber trade, and was disappointed at the end. Everybody will know that I refer to Mr. Charles R. Flint, and nobody can doubt his competence in the matter.

In resuming I wish to confirm your own impression, with my experience, that a monopoly in the rubber business is quite out of the question.

Some weeks ago I had in my hands a copy of a speech made in Boston at the New England Rubber Club dinner, referring to a probability of insufficient supplies of rubber, or that there would not be enough crude to manufacture enough goods for consumption. Although the speaker was a most competent one, I beg to give my opinion that such a fear is very problematical. Not only the supplies coming from the Amazon increase every year, and probably will continue to, but Ceylon and African crops, in the next 10 or 15 years, will yield such

big quantities, that if consumption does not increase in proportion, prices of crude will have to fall considerably.

Your Journal has published many articles about Ceylon and its rubber plantations, and there is no doubt that not only in quantities but in excellent qualities we must count largely upon those grades in a not very distant future. About Africa I beg to quote the following portion of Viscount Mountmorris's speech at the Liverpool Chamber of Commerce on May 29 last. He refers to the plantations of vines:

The number planted by the state itself and under its direct administration—that is, by natives under their direction—is roughly, I believe 3,000,000 a year. That has been going on for some years now. In addition the *cessionnaires* are all replanting. In all something like 60,000,000 rubber producing plants are known to exist and are under the care and supervision of the state authority, and if in ten years these plants produce only a kilo per annum each, they are sufficient at the present moment to supply the whole of the present world's demand for rubber. Of course the mortality amongst them will probably be great, but making due allowance for that, at the same time this continuous replanting of 3,000,000 at least per annum will make good any further loss that may occur.

Therefore, I ask, with this data in hand, can anybody believe in inadequate supplies of crude rubber?

I only wish to bring these two points to your attention, and I end, hoping that about this time next year, if I am alive, I can applaud the further success of the big rubber consolidation, which is so justly expected, not only from the latest merger, but also from the trip of the *Virginia* to the Amazonian waters. Yours very respectfully,

FRANK DA COSTA.

PARÁ, JUNE 1, 1905.

## WIRELESS TELEGRAPH ON THE AMAZON.

FROM "A PRO-INDIA TO JATA," NUMBER 4.

EXCELLENT results have at last been obtained by the experiments with wireless telegraphy, which during the past few months have been made between Breves and the town of Pinheiro. The following message addressed to us was received at the last named station yesterday during the night and transmitted by the national telegraph service, showing the complete success which has now crowned the tenacious efforts of the holders of the franchise for this important improvement. The message reads:

The S. S. *Tabatinga* passed Breves at 3 P. M., carrying 3009 kilos of India-rubber for Camillo Dias, 1508 for Esteves Bastos, and 4082 for others.—*Wireless*.

## DECREASING PROFITS ON CONGO RUBBER.

THE general meeting of ABIR, one of the large *cessionnaire* companies trading in rubber on the Congo, was held at Brussels on June 5. The report for the fiscal year 1904 showed profits of 1,201,400.89 [= \$231,870.37]. The dividends for the year amount to 400 francs per share (of 500 francs); of this 250 francs have been paid already, and 150 francs are due from July 1. In a single year (1900) the profits were 4,873,356 francs [= \$940,557.70]. The company gathered 445 tons of rubber and 9½ tons of ivory in 1904. The report makes favorable mention of the prospects of the rubber plantation in the Malay States in which the company invested two years ago.

DR. ALBERTO PIRELLI, of Pirelli & Co., the rubber manufacturers of Milan, Italy, and the factory superintendent, Signor Emilio Calcagni, were expected to sail from Liverpool for the United States on June 28.



## OBITUARY.

COLONEL W. G. WINANS.

WILLIAM G. WINANS, for a number of years identified with the rubber trade in New York, and for the last six years a resident of Jacksonville, Florida, died in that city on March 12, at the age of 62 years. Mr. Winans belonged to a wealthy New York family, his father having been president of the Hamilton Life Insurance Co., and he himself occupied the position of secretary for some 19 years. At the beginning of the civil war he enlisted as private in Company A, Light Guards, Seventy-first regiment American Guards of New York city. He served with distinction and was promoted to adjutant and at the close of



WILLIAM G. WINANS.

the war was colonel of his regiment.

His entrance to the rubber trade came about through the death of his brother, whom he succeeded as treasurer of the Peerless Rubber Manufacturing Co. in 1890. Through unfortunate investments he lost not only what property that had been bequeathed to him but was forced to sell his holdings in the Peerless company, and in order to again build up his fortunes went to Florida with the idea of becoming a fruit grower on a large scale. In this he was unsuccessful, and so chagrined was he by his lack of success that he withdrew himself from all intercourse with his friends and even his family heard of him but rarely.

During the days of his prosperity Colonel Winans was a member of the Old Guard, Union League, Colonial, Lotos, and other clubs in New York, and was a prominent Mason. It was through this latter organization that his relatives heard of his death some two months after it occurred, when his body was conveyed to New York, where the funeral services were held, the interment taking place in the Old Collegiate cemetery, in Second street, in the Winans vault, which was constructed nearly 100 years ago.

GEORGE LANGDON.

GEORGE LANGDON died on May 28 at his home in Plymouth, Connecticut, in which town he was born August 4, 1826. His father was Edmund Langdon, who married Emeline, daughter of Timothy Gates, of East Haddam. He was prepared for college in Mr. Hart's school, at Farmington, and was graduated from Yale in the class of 1848. In the same year he engaged in business in Colchester as a merchant, but afterwards he became a resident of New Brunswick, New Jersey, and connected with the India-rubber industry.

He was interested from the beginning in the Novelty Rubber Co.—at one time one of the most successful concerns in the hard rubber industry—and for awhile was secretary of that company. In 1857 he returned to Connecticut, and was interested in the old American Hard Rubber Co., whose factory was at Beacon Falls. Mr. Langdon became interested also in the

New York Rubber Co. at an early period of its history, and remained a shareholder in it until his death.

Two of Mr. Langdon's friends, in his native county in Connecticut (Litchfield), became successful New York merchants, and they were likewise interested in the Novelty Rubber Co.—John C. Calhoun, one of the founders of the still successful dry-



GEORGE LANGDON.

goods house of Calhoun, Robbins & Co., in New York, and Lucius P. Porter, who, in addition to being concerned in the Novelty Rubber Co., was president of the Norfolk and New Brunswick Hosiery Co., with an adjacent factory—a concern in which several prominent rubber manufacturers were at one time shareholders and which is still in existence.

Mr. Langdon represented Colchester in 1853 and Plymouth in 1859, in the Connecticut legislature. In Plymouth he was selectman, school visitor, town treasurer, and grand juror. He was a member of the board of trustees of the state reform school. He was also a deacon in the Congregational church and a member of the Connecticut Sunday School Association. He married, September 3, 1851, Miss Elizabeth A. Chapman, of Colchester, who survives, with two sons—George E. Langdon, who holds a position in the custom house at New York, and Lucius P. Langdon, of Plymouth—and a daughter, Miss Ellen Langdon.

## THE RUBBER SHOES WORN IN CHINA.

THE United States consul at Amoy reports: "While under the present system of noting imports it is impossible to ascertain the country of origin of most goods from abroad sold in China, except by their particular brands, it appears that Germany is supplying the Chinese at the present time with considerable in the way of rubber shoes and boots which ought to be supplied by the United States. The reason German goods have been preferred emphasizes what American consuls in China have been saying for years, viz., that the Chinese market must be studied if American trade in it is to be furthered. With ordinary Chinese dress it is impossible to wear rubber boots of the sort usually made in the United States. The Germans make a short half boot or elongated gaiter of light-weight rubber and line it lightly. These meet the Chinese requirements and are growing very popular. Some Chinese men are wearing ordinary American style 'rubbers' in damp weather. All these goods are worn without other shoes or boots."

**RUBBER NECKWEAR.**—Rubber collars have long been a familiar sight, but rubber neckties are more of a novelty. The flat ascot ties commonly worn by automobile drivers and coachmen, and usually made of white piqué, have now been reproduced in white rubber. They are easy to adjust, do not wrinkle, and are easily kept clean—all of which qualities appeal to the ordinary coachman.—*New York Sun.*

## A VISIT TO RUBBER PLANTATIONS IN NICARAGUA.

*By The Editor of "The India Rubber World."*

WE three, the Importer, the Manufacturer, and the Editor, left Port Limon, Costa Rica, at 1.30 in the afternoon on a hot, tropical December day. The short voyage from Port Limon to Bluefields, something like 150 miles, was to be taken on a small, 52-ton schooner owned by Belanger's, Incorporated, of Nicaragua, and

used in trading up and down the coast. The schooner was equipped with a gasoline auxiliary which took up most of the room aft and made the rest of it so thick with gasoline fumes that it was difficult to stay in the cabin ten minutes at a time, so we lived

go straight up, but slanted off into an especially black cloud and appeared to be a mile and a half in length. When it was near enough, the captain began shooting in its direction with an old-fashioned Colt's revolver, and the Manufacturer, getting his gun, took a hand in the same game. Whether the concussion did the work or not I don't know, but before it reached us it suddenly dissolved and in a very few seconds no trace of it was to be seen.

After that we had no further excitement except the catching of a big kingfish, which helped out our table immensely. That night we slept again on deck and went through several showers. We sailed into Bluefields about 9 the following morning, where the doctor passed us as "healthy, but ugly," and then we went up against the custom house officials at the bluff, who fingered our belongings for anything contraband, seeming to take particular delight in running grimy fingers over our toothbrushes, and to have a deep anxiety to unroll camera films, and so on. We got rid of them at last and boarding a flat-bottomed sternwheeler were taken across the broad expanse of Bluefields bay, landed at Belanger's wharf and at once went up to La Tropical Hotel for a bath and breakfast. There was but one bathroom and that was situated over the kitchen, which was proved by the sign on the wall: "Don't slop water

on the floor; range just below. Gives food a soapy flavor."

After breakfast we went out and looked over the little city of frame houses, so radically different from most Central American towns, both in its architecture and in the fact that it is built on a side hill where there is a certain amount of drainage. We didn't tarry long in Bluefields, however, for our flatbottomed boat, *Nat, Jr.*, a sternwheel freighter, was waiting, and with our luggage aboard we soon started up through the wonderful



WHARF AT BELANGER'S.

on deck. The vessel was called the *Sunbeam* and was manned by a mixed crew of negroes from the Fortune islands, San Blas Indians, and one Englishman, and was commanded by a Cayman islander.

Starting out against a head wind, our gasoline "Kicker" put us along at the rate of about four miles an hour, and we sat scorching on deck until finally the sun set and we turned in, still on deck, sleeping in our clothes on a pile of old sails in the stern of the boat. The bed was far from comfortable for one at all finical about the soft side of a plank, and the Importer did not take to it a bit. He had chosen a place next to the bulwarks and had only one ring bolt in the small of his back, while the Manufacturer was curled in the form of an S around a huge cleat and a part of the steering gear. However, morning came at last and the little boat kicked along through a blazing sun at first, until finally it clouded up and later, about three miles to the northeast, a huge waterspout was sighted. We were all so dull and drowsy that we didn't pay much attention to it at first. When it drew nearer and nearer and the captain furled all sail and made everything fast, we thought it might be possible that we were going to have some fun. It was the first time I had ever seen anything but pictured waterspouts and I had always been a bit skeptical about them; but when it got within a few hundred feet of us I was a most thorough convert. It was really a most remarkable sight. The sea was quite smooth, except where the end of the great funnel touched the water, and there it was broken up into curious little wavelets. The huge circular tube of vapor did not



WATER FRONT AT BLUEFIELDS.



LA TROPICAL HOTEL BLUEFIELD



system of lagoons and waterways that were to be our pathway to the rubber plantations.

These comprise the Bluefields river, the Escondido ("Hidden waters") river, and a great variety of deep lagoons and waterways intermingling in inextricable confusion, shut in by walls

of tropical foliage, an expanse of natural passages so great that a navy might easily be hidden there without the remotest chance of detection. Indeed, in the old days of the buccaneers these lagoons were favorite retreats, and if closely pursued a vessel could slip into one of them, tie a few branches to her topmasts and defy discovery.



WALDRON'S STORE "CUKRA" AND "CANADA" PLANTATIONS

The ride up through the Escondido was simply entrancing. There was scarcely a ripple on the water; the foliage of palms, palmettos, mangroves, wild bananas, interspersed with patches of pampas grass the stalks of which were 20 and 30 feet high, all bound together with vines and spangled with flowers, the huge flocks of blue and white cranes and the basking alligators—all made a panorama so wild in its tropical beauty that it added new fascinations every moment.

Finally, late in the afternoon we turned into Sloophouse creek, and a little later were moored at the pier belonging to the "Cukra" plantation. Here we disembarked, and leaving our luggage to be brought up later, followed a narrow gage banana railway up over a little hill, through a part of the 1500 acre banana plantation of the Cukra company, and were soon at the house of Mr. Gordon Waldron, one of the owners, where we had a bountiful supper and a most interesting chat, chiefly on rubber. After supper, in the bright moonlight, we boarded a flat car drawn by a diminutive engine and rode three miles into the country to the road that led to the "Manhattan" plantation. There saddle horses and a wagon were awaiting us, and as it had suddenly clouded up and begun to rain, the Importer and I got on the top of the baggage, preferring to trust ourselves to a wagon rather than a horseback ride through the pitchy darkness. The road was far from smooth and we got ample exercise before reaching the plantation house. We did reach it finally, at 11.30, and turning in under mosquito nets, slept like tops.

At daybreak the whole crowd roused out and going to the door, found that we were right in the middle of planted rubber. It was on all sides of us and even in the yard, the average age

being about three years and the trees looking stocky and thrifty. The soil seemed to be a red loamy clay, quite porous, with considerable volcanic rock through it, and the country rolling rather than flat. The soil was exceedingly deep, as was attested by several wells that had been sunk, the deepest being 40 feet, which had not got through that formation.

That the trees bled very freely I was able to prove before breakfast, as I walked around and ran my knife into the spongy bark. A little later when we started out on our tour of inspection, the Importer, who would not ride horseback, was fitted out with a sort of buckboard, drawn by a mule and driven by a Southern darkey known as Jake. The rest of us rode horses.

Almost the first thing that struck me about the planting problem down there was the remarkable prevalence of the morning glory vine. Just as soon as the land is cleared and planted it takes possession, and if it were not cut down constantly around the young rubber trees, it would most effectually smother them. When the trees get a good start, the vine suddenly dies out and the grass comes in. My belief had always been that for grass to get into rubber was fatal to the growth and productiveness of the tree. I saw acres down there, however, with the grass growing among the three year old trees, and they were apparently as healthy and thrifty as they could possibly have been. A little later the shade of the tree seems to discourage the growth of the grass and in one planting, where the trees were between four and five years old, the grass had practically disappeared.



WALDRON'S "CANADA" PLANTATION

The refusal of the *Castilloa* to put up with too much water was emphasized by a section of land, containing perhaps ten acres, on the Manhattan plantation, where during the heavy rains the water had not drained away quickly enough and most of the trees had died.

Speaking of the rain in this section, the local report is that there is about 250 inches a year. I don't know that that is the result of actual meas-

urement, but while we were there it certainly rained about as easily as it does in any part of the world. During a forenoon's ride we would often go through three or four showers, not heavy ones, but like the gentlest sort of refreshing spring rain. The elevation of the bunch of plantations that we were visiting is about 250 feet above sea level, and as a rule, soil was very rich and very well drained.

One of the first plantations that we visited was one owned by



RESIDENCE OF SIM IRON.



SIM IRON'S RUBBER PLANTATION.

a genial old gentleman from Virginia by the name of Sim Iron. He runs his place himself and has about 17,000 trees between three and four years old. His ranch houses were more picturesque than those of the Manhattan in that they were palm thatched and built largely in the native fashion. During a part of the year the old gentleman has his wife on the place with him and they seem as happy and healthy as if they were running a farm in a northern clime.

After looking over the Sim Iron plantation we visited "Daytonia," now the "Rubber Grove" plantation, where were some very good trees, although it was explained that the man who started the plantation sold something like \$200,000 of stock and spent only \$30,000 in planting. He was later prosecuted for fraud and was sent to jail in some one of the United States. The plantation was then taken over by a local company who are getting it into good shape.

After leaving Daytonia we visited some small private plantations, all of *Castilloa*, which looked excellently. Then we returned to the Manhattan house for noon breakfast, and in the afternoon walked across lots to look at the rubber on the Cukra plantation. Just as we got there our first real shower came down. That was not any spring rain; it was more like a cloudburst, and kept us penned in the house for nearly an hour. It cleared off, however, as suddenly as it came on and then we began to examine the interesting experiments that were being carried on by Mr. Waldron.

He had already begun tapping some of his six year old trees and close to the house where we had taken refuge from the shower was his coagulating and drying house. In this house were galvanized iron cans holding half a barrel, each filled with *latex* mixed with water and formaldehyde, while from the ceiling hung long strips of rubber being air dried. Mr. Waldron used the formaldehyde to keep the *latex* from coagulating too soon, and washed out the vegetable acids and the albumen by diluting the *latex* and creaming it. He found some difficulty in coagulating, and had, therefore, fitted up a couple of caldrons close to the house and was boiling the *latex*. The rubber appeared to be very clean, but a little short. Indeed

Mr. Waldron acknowledged that he thought it was coalesced instead of coagulated.

From the coagulating house we walked down through the rubber orchard to the trees that were then being tapped. This work was done very carefully and in the most cleanly way, the *latex* being caught in tin cups of which there were three rows on each tree tapped, making 12 cups to the tree. After the milk had stopped flowing and the cups had been emptied, a native was sent around with a spoon to take off the thick creamlike exudation that gathered in the cuts. As this was taken off before coagulation, it went into solution with the rest of the *latex* without any trouble. Mr. Waldron was getting three ounces of dry rubber from each tree and was planning to tap them a number of times during the year. He talked of tapping by team work through the whole of the dry season, and during the wet season to skip only a couple of weeks during the torrential rains.

We tried the Ceylon tool, but it didn't seem any better than the ordinary knife for this work. The general manager of Cukra, although very much of an iconoclast, and not in the habit of following other peoples' lead, acknowledged that much of his tapping and coagulating was only experimental and that he expected before long to work down to a simpler and more practical system. At the same time, he claimed that, cumbersome as his present process was, it proved most thoroughly the profitability of rubber planting.

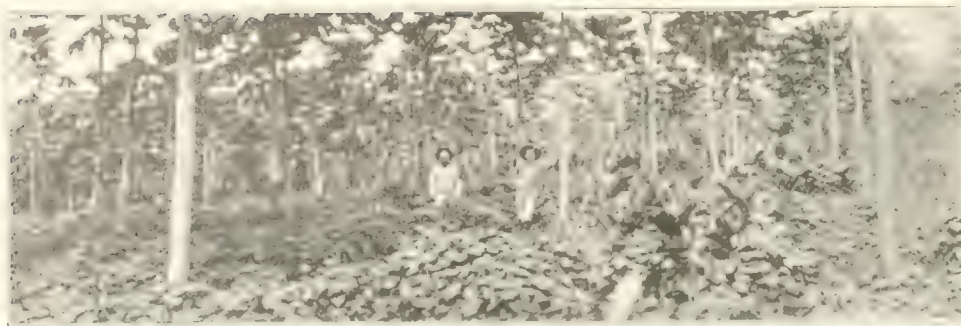
During the rest of our stay on this group of plantations we made our headquarters at Manhattan, riding out in various directions and examining the rubber and discussing it with the various planters, who were much interested in making a success of it. There are in the vicinity, at a conservative estimate, about 400,000 cultivated *Castilloa* trees, the largest single plantation being the "Canada" plantation, of which Mr. Waldron is manager and chief owner. This plantation has about 200,000



IN THE STATE OF CALIFORNIA.

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MANHATTAN PLANTATION. "CASTILLEJA" TREES. GROUND COVERED WITH MORNING GLORY VINES.

trees. Next to that comes the Manhattan, with about 140,000 trees. This group of plantations lies in the form of an ellipse about five miles long and two miles broad.

After having visited the typical plantations, collected samples, and secured all the information possible, the whole crowd saw us down to the Cukra pier, where we again embarked on the *Nat, Jr.*, and started down the river on our way back to Bluefields.

We reached this Americanized city early in the evening and found that a fruiter was starting for New Orleans the next morning and that the governor had promised to hold it for us, so that we could not miss it. In the meantime, our friends began to make it easy for us to leave the country. One of the first things to be done in leaving Nicaragua is to secure a passport, which one pays a dollar for. Mine described me as being about 35 years old and having red hair, but as long as it sufficed to let me out of the country I didn't care, particularly as the descriptions of the Importer and the Manufacturer were even less flattering.

I have already mentioned that the custom house at Bluefields is situated at the bluff, some miles from the city itself, and it was while going over to the fruiter that was to take us to New Orleans that we saw a very curious instance of the peculiar concessions that are held by various companies. It seems that a steamer which was not one of the elect had come down there for a load of bananas. In other words, it didn't belong to the company having the navigation concession. It was, therefore, not allowed to go up into the rivers or lagoons, but, not to be beaten, the steamer's captain sent up to certain planters who promptly despatched a huge scow load of bananas to the bluff where the steamer lay. The government caused the scow to be laid alongside of its wharf while it discussed the unlawfulness of the proceeding, and while the discussion was going on, marched something like a hundred soldiers onto the gunwale of the scow, which careened it just enough to cause the water to flow over the low bulwarks and sink the boat, bananas and all.

I tried to get a photograph of the sinking scow, but was deterred by a gentleman who said that I might

get in trouble with the customs officers and get my stuff held up if I gave evidence of being too active a partisan. This was no idle dream, for I had trouble enough with the officials anyhow, although I was not taking anything out of the country except what I had brought in, with the exception of a few samples of rubber and some *Castilloa* twigs that I was taking home in order to discover by what disease they were attacked.

Speaking of diseases of *Castilloa* tree, I noticed in a yard surrounding one of the plantation houses that numbers of trees were affected by scale, some of them quite badly, the insect appearing to have practically destroyed the lactiferous tubes so that the outer bark presented a curious shrunken appearance. This scale, as far as I was able to observe, only appeared where neither undergrowth nor weeds were in evidence round the foot of the tree. All of the trees thus affected were uprooted and burned. I, however, brought samples of the stems back to the United States, and through the courtesy of the experts at the Connecticut agricultural experiment station at New Haven, and the bureau of entomology, at Washington, was able to identify the disease and also discover simple remedies. The reports of the two entomologists follow:

DEAR SIR: Your letter with specimens has been referred to me. The tree seems to be attacked by two species of scale insects; the large brown one is a *Lecanium*, and the small, glassy, greenish yellow one is an *Asterolecanium*. We do not have the literature by which I can determine them specifically. From a knowledge of similar species found in this part of the country I should expect that a thorough spraying with kerosene emulsion or whale oil soap would destroy them,

though of course experience is needed to know just how strong to make the mixture. I should try some of these made in the proportion recommended in published bulletins, and if it did not kill them I should use somewhat stronger mixtures. Very truly yours, W. L. BRITTON,

State Entomologist, The Connecticut Agricultural Experimental Station, New Haven, Connecticut, January 7, 1905.

DEAR SIR: - - - The scale insects upon the twigs which you sent represent the akee fringed scale (*Asterolecanium pustulans*), and *Lenicaspis rugosus* (?). This *Asterolecanium* is very common and very in-



MANHATTAN PLANTATION. DWELLING HOUSE.



ROAD THROUGH MANHATTAN PLANTATION, AMONG "CASTILLEJA" TREES.



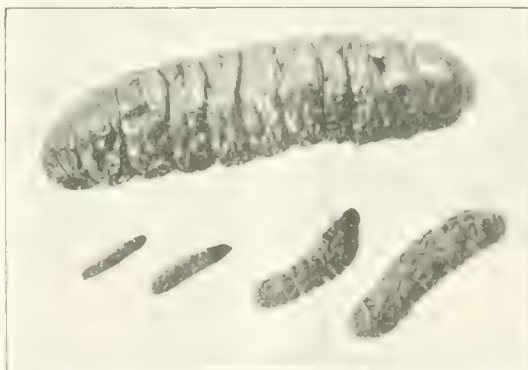
MOSQUITO INDIANS.

jealous in the West Indies. It works principally upon aloe, oleander, fig, and hibiscus. Mr. Maxwell-Lefroy, the government entomologist to the West Indies, in pamphlet series No. 7 of the Imperial Department of Agriculture for the West Indies, recommends kerosene emulsion for the control of this insect. His formula and method of preparation is as follows: "Kerosene emulsion: Dissolve one half pound of hard soap in one gallon of water; add two gallons of kerosene to the hot liquid, and immediately churn with a syringe or force pump until the mixture becomes creamy. This is a stock solution. Make up to 33 gallons. Use only rain water or soft water."

The kerosene emulsion preparation can also be applied for the *Lecaniodiaspis*, of which only a few specimens were found on the twig which you sent.

Yours truly, I. H. CHITTENDEN,  
Acting Chief of Bureau  
Bureau of Entomology  
Washington, D. C., February 2, 1905.

Another possible enemy to the *Castilloa* that the alert planters were seeking information about was a wood borer which attacked the tree where the self pruning branches broke off, and occasionally where the bark was cut or wounded. The *larvae* of the insect are large grubs that after penetrating the outer bark burrow upwards inside of the cambium, and then straight through the wood, completely honeycombing it so that the trees break short off when very little wind comes. This does not always kill the tree, but it sets it back appreciably. These borers appear to be most active during the months of June and July. The planters for a remedy were using a mixture of tar, kerosene oil, black oil, and sulphur. This killed the grub if it touched it, but it was very difficult to reach it because of the length of the burrow. A suggestion for keeping the borer out was to have a gang of men constantly going over the trees and tarring all cuts and the sockets left by the dropping off of the temporary branches. This, however, would

"CASTILLOA" STEM  
ATTACKED BY SCALE.

LARVAE OF "CASTILLOA" BORER.



STERN OF "NAT. JR."

be very expensive and hardly practical. I was able to secure a number of specimens of the *larvae*, and the bureau of entomology at Washington decided that they belonged to one of the large moths, family *Cossidae*. Their report was that they knew little about the work of this moth, but that the best way to kill the borer was to inject a few drops of carbon bisulphide into the burrow with an oil can, closing the orifice with a little wax. The fumes of the solvent would then penetrate the lower part of the burrow and kill the grub. Professor John Barlow, of Kingston, Rhode Island, however, reported that instead of a moth it was probably a beetle. He suggested the same treatment for the destruction of the grub as the bureau of entomology at Washington did. In this connection it may be well to recall that sometime before this an anonymous writer reported that a beetle, the *Aconsymus longimanus*, was troublesome in Nicaragua just in this way—that is, laying eggs in wounds in the bark of the *Castilloa*, which developed into borers and greatly injured the trees.

The fruiter on which we finally embarked was a Norwegian of about 700 tons and carried 10,000 bunches of bananas. As we were the only three passengers, we took possession of the bridge and also of the captain's quarters and lived high in everything except food. We went out in the face of a norther and ran into one after another during the whole passage. The boat had no refrigerating apparatus, and to save

the fruit both the fore and after hatches were kept wide open, and it was a constant matter of wonderment to me that some of the big green seas didn't topple over our bow and swamp us, but they didn't, and we sailed on by Cape Gracias a Dios, through squall after squall, the temperature all the time in the eighties, and finally, missing the delta of the Mississippi by a wide margin, ran almost to Mobile before we got our bearings. We finally got right, however, and went up the Mississippi and landed in New Orleans just in time to enjoy the fireworks with which they usher in Christmas day.



## ONE POUND OF COLORADO RUBBER.

THE Salida (Colorado) *Mail* of June 2 contained the following highly important item of news: "Mr. F. E. Hodding, president of the Rocky Mountain Crude Rubber Co., operating an extraction plant in this city, announces that his company is seriously considering an offer from Buena Vista to come to that city. Mr. Hodding says the power of the engine and boiler is insufficient to pull the extractor, and Buena Vista offers a bonus of \$2000 to have the plant locate there. This sum would start them in first class condition. A test run was made Wednesday and one pound of rubber was extracted from ten pounds of root, showing it to contain 10 per cent. of the crude product. Mr. Hodding says the extractor works entirely satisfactorily and with more power the company could produce several hundred pounds of rubber per day."

## AMERICAN PRODUCTION CO.

THE American Production Co. was incorporated May 12, 1905, under the laws of New Jersey, with \$50,000 capital authorized, and with registered offices at Camden, N. J. The principal office, however, is at Pittsburgh, Pennsylvania, and the officers are as follows: M. G. Leslie, president; A. W. Dravo, vice president; E. H. Swindell, secretary; and W. H. Jacob, treasurer. Recent reports from Buena Vista, Colorado, refer to the presence there of Mr. Jacob and S. H. Woodbury in the interest of the American Production Co., and to the granting of certain franchises by the city to this company, in consideration of the erection of a factory for the treatment of at least 15 tons daily of the Colorado rubber plant.—A widely published report having connected the name of The Diamond Rubber Co. (Akron, Ohio) with this enterprise, Mr. A. H. Noah, treasurer of the Diamond company, informs THE INDIA RUBBER WORLD that the report has no basis in fact. Mr. Noah states that while in Colorado some months ago he investigated the so called rubber weed in that region, and found it to contain so little rubber that he considered it unprofitable to invest any money in its exploitation.

## A SUGGESTION TO JAVA PLANTERS.

WRITING in *De Indische Mercur* (Amsterdam), A. H. Berkhout, a leading agricultural expert of Holland, quotes from an article contributed to a French journal by Emil De Wilde, a well known botanist who states that he has searched in vain for Caoutchouc in the specimens of *Actinella Richardsonii* contained in the herbariums. Heer Berkhout adds: "The impression we have gained from the above article, is that this is an instance of American humbug, but as we may possibly be mistaken, we consider it useful to bring the matter to the knowledge of the Java planters. Provided a further investigation gives good results, seeds will probably soon be brought into the market, and our Java cinchona bark planters might make a trial on a very limited scale."

## RUBBER TIRES FOR FIRE ENGINES.

AT a recent meeting of the board of police and fire commissioners of Utica, New York, the question of having some new fire engines now being built for that city equipped with rubber tires was decided in the negative. Mr. R. A. Henry, clerk of the board, advises THE INDIA RUBBER WORLD: "As to the matter of equipping our fire engines with rubber tires, the question of finances was not considered as much as the durability and lasting qualities of the steel tire wheels. We do not think that an engine working at a fire in five or six inches of hot cinders equipped with rubber tires would stand the heat and fire as well as steel tire."

## ONE RUSSIAN "CONSTITUTION."

A CORRESPONDENT writes to THE INDIA RUBBER WORLD: "One of the large iron works of St. Petersburg had a strike early in the year. At the end of a couple of weeks the men went back to work, having obtained what they struck for—shorter hours and increased pay. Evidently, in their minds, the strike was the proper lever with which to obtain one's wants of whatever kind. In less than a week another strike was inaugurated. The spokesman of the workers said that although they had obtained all they asked for, yet they would not work with content unless they had a Constitution! The managers tried to convince the men that from the Czar alone might they obtain that much coveted blessing, but no impression was made—no constitution, no work! At last one of the directors drew up a formidable looking document, bearing large red and green seals and with much formality handed the men a "Constitution." With light hearts and happy faces the newly made freemen went to work—and that is the type of Russians now clamoring for a constitution."

## INDIA-RUBBER GOODS IN COMMERCE.

## EXPORTS FROM THE UNITED STATES.

OFFICIAL statement of values for April, 1905, and the first ten months of five fiscal years, beginning July 1, from the treasury department at Washington:

MONTHS.	Belting, Packing, and Hose.	Boots and Shoes.	All other Rubber.	TOTAL.
April.....	\$123,705	\$ 37,362	\$ 232,318	\$ 393,385
July-March....	670,551	1,062,731	1,831,748	3,565,030
Total.....	\$794,256	\$1,100,093	\$2,064,066	\$3,958,415
Total, 1903-04..	734,083	971,625	2,036,682	3,742,390
Total, 1902-03..	680,147	983,044	1,881,773	3,544,964
Total, 1901-02..	514,470	939,671	1,437,099	2,891,240
Total, 1900-01..	448,085	662,971	1,432,124	2,543,180

## CUBA.

OFFICIAL statement of values of imports of manufactures of India-rubber, for two fiscal years:

FR.	1903-04.	1904-05.
United States.....	\$35,252	\$35,249
Germany.....	10,253	8,353
France.....	4,954	3,678
Great Britain.....	1,135	866
Austria-Hungary.....	991	702
Spain.....	180	311
Mexico.....	—	80
Italy.....	109	34
Total.....	\$51,358	\$48,125
Duties collected.....	6,121	5,303

ALUMINUM HOSE POLES.—An English rubber manufacturer on a recent visit to the United States, in going over an important mechanical rubber factory, expressed surprise at seeing iron hose poles in use. He said that he had for years used aluminum hose poles, made in the form of tubing, and that he found them infinitely preferable. They only weighed one sixth as much as iron, did not get out of shape easily, were absolutely unaffected by sulphur fumes, and were so smooth that the hose could be removed without an air compressor. Of course, the first cost of the tubes was a little more, but when they for any reason ceased to be useful, he could send them back for remelting and get 50 per cent. of the first cost, and anyhow, as aluminum is so much cheaper than it used to be, the cost was not an item to be seriously considered.

## THE "GUAYULE" RUBBER PLANT—I.

By Rudolf W. H. Pl. D.\*

WITHIN the confines of the regions in which the plant grows in Mexico, Guayule rubber has been known for a long time. In some parts of the country, and especially in the state of Durango, toy balls have from times immemorial been made by chewing Guayule bark. The first reports concerning this plant and the rubber derived therefrom are said to have been made by a certain Negrete (?), a Jesuit priest, as far back as the middle of the eighteenth century.

The Guayule, or Huayle (*Parthenium argentatum*, A. Gray), a dwarf tree belonging to the order of the *Compositae*, varies in height between .20 and 1 meter (average height about .60 meter). The trunk has a gray bark and spreads out into many branches. At the ends of the branches, which are often knotted, the reproduction shoots are developed, and bear leaves provided with stems, partly lancet shaped with even edges, and partly serrated with rounded indentations. They are silver gray in color, 2 to 4 cm. in length and from .3 to 1 cm. in width, and form a bushy or umbrella shaped crown. The plain, yellowish buds are affixed to comparatively long stems (ranging in length up to 20 cm.). The plant blossoms during the months of September and October.

The large number of young plants sometimes found surrounding the older trees make it probable that the Guayule can be easily reproduced by means of its seed, provided conditions are somewhat favorable. In the territory surrounding Jimulco, for instance, as many as 50 young plants have been found around full grown trees. Conditions for the development of the young plants, however, are often very unfavorable, especially in very hard and rocky soil, where it is difficult for the shoots to take root. This is probably the reason why young plants are seldom found in the territory surrounding old mines, where in former years Guayule wood, on account of its excellent heating capacity, was used as fuel for ore roasting and for bakers' ovens.

The fact, however, that some young plants are found even in such unfavorable spots, makes it likely that they have been developed from such seeds as were either stamped into the ground by goats (as these animals are the ones which commonly graze in the Guayule territories), or had been dropped by these animals, and thus found favorable conditions of development in the animal excrements. It would, in fact, be difficult to find any other explanation for the enormous growth of the Guayule plant in small, isolated places (having usually the size of the resting places of the goat herds), as such accumulations of Guayule plants would otherwise be found in the lowest places at

times covered by surface water if the seeds had been carried along by the rainfall.

In some districts, such as the territory surrounding Saltillo, it is said that the goats are doing considerable damage to the development of the Guayule by frequently feeding on the leaves of the young shoots. That these animals, however, should die by eating Guayule leaves appears very unlikely. Land owners and managers had not observed any such results, although the knotted ends of the branches showed that the leaves and reproduction shoots of the Guayule plants growing on their lands had often been gnawed by goats.

The general opinion is that the Guayule gradually commences to die off after a life of about 15 years. The stumps of trees that have been cut down are said to soon sprout again and to

produce, after a lapse of several years, new plants ready for cutting. How long the time is that must elapse appears to be still unknown. As the Guayule roots, however, break easily when the trunk is cut down, most gatherers prefer to pull out the stronger parts of the roots along with the trunk.

The name Guayule (guayhule) or Huayule is probably derived from the Spanish word *Hay* ("there is") and from the Indian word *Hule*, meaning India-rubber. Besides this the plant is known by several other names. In the state of Durango (in the neighborhood of Pasaje), for instance, it is called "yerba de hule," in the north of Zacatecas "hule," in the northern parts of San Luis Potosi "yule," and in the Saltillo territory "jiguhite" (meaning weed). In a few places it is known as "copalin."

The other names "mariola" and "yerba del negro" mentioned by W. Prampolini in his patent specification are evidently the result of misinformation, for in the states of Durango, Coahuila, Chihuahua, Zacatecas, in the Federal district, etc., another species of *Parthenium* (*Parthenium incanum*, H. B. K.), similar to the Guayule, is known under the name of "mariola"

and is a popular remedy for stomachal diseases. The *Sphæralcea angustifolia*, St. Hilaire, of the natural order *Malvaceæ*, used as an emollient, is known in many parts of Mexico as "yerba del negro."

The Guayule is found in a comparatively large part of the "bush prairies" (*chaparrales*) in the northern part of the Mexican highlands. The total supply, however, as well as the extent of the territory in which the plant grows, has been considerably overestimated. It seems that the principal cause of this overestimation is due to the "mariola" (*Parthenium incanum*), which is found in the same territories as the Guayule, but in vastly greater numbers. This connection is furthermore proved by the fact that specimens of *Parthenium incanum* have



THE GUAYULE PLANT.†

\* Translated for THE INDIA RUBBER WORLD from *Der Tropenpflanzer*, Berlin, IX Jahrg., Nr. 5.

† Photographed for THE INDIA RUBBER WORLD.



been sent to the Mexico Museum as a rubber producing plant.

Although it was formerly contended that the Guayule plant was to be found throughout almost the entire north and northeast of Mexico, this supposition has been proven to be unfounded. Still, there seems to be enough material at hand to supply the demand of a considerable number of good sized rubber works.

Besides some smaller districts in Chihuahua, the northern parts of the states of Zacatecas and San Luis Potosi, the eastern part of Durango, and especially the southern districts of Coahuila, appear to offer a profitable field for the working of the Guayule plant. It is said that smaller places of supply, although sometimes at considerable distances from each other, extend from the south of Coahuila to the state of Chihuahua (where the plant has hitherto been found only near Santa Rosalia and Jimenez), and that the plant is sporadically found as far as New Mexico and Arizona. The "Biologia Centrali-Americana" states that the Guayule is likewise indigenous to southern Texas.

The eastern boundary of its territory is formed in San Luis Potosi and southern Coahuila by the foothills of the Sierra Madre Oriental. The western boundary in Zacatecas and Durango would scarcely exceed a strip of an average width of about 100 kilometers, running parallel with the Mexican Central railway. On the line of the International railway, in a westerly direction, a few isolated plants only are found above Pasaje. The plant known as Guayule on the lower Rio Grande and in Nuevo Leon, as well as in the district of Monclava (Coahuila), is neither by its qualities, nor by the territory in which it occurs, in the least similar to the *Parthenium argentatum*.

The existence of the Guayule in the southern part of the Mexican highlands, between Puebla and Tehuacan, has not as yet been proved. Assertions made in this regard have been found to be merely suppositions and were not confirmed by the investigations hitherto made. The same appears to be the case with the reputed Guayule of Central America and Venezuela.

Concerning the elevation on which the Guayule is found, its chief territory may be placed between the altitudes of 900 and 1700 meters [=3000 to 5600 feet]. The largest supply within this zone is not as often found on the plateaus as on the inclines and hills, and more specially on the low foothills of the larger mountain chains, the soil preferred by the plant being mostly very dry and often rocky, with a large percentage of lime in its composition.

The supply of Guayule in its territory is very unevenly distributed. In most parts the plants are isolated, growing sometimes in large and oftentimes in small numbers among the other plants of these mountain inclines, rich in lime. At rare intervals small spaces are found, where it predominates among the flora of the *chaparrales*.

An estimate of the average supply per hectare is very difficult to make, both on account of the uneven distribution of the plant and of the great differences in the size of the individual plants. In favorable territory I have on several occasions counted 30 to 40 plants on an area of 100 square meters, which would mean a total supply of 3000 to 4000 Guayule plants per hectare [=1215 per acre]. The differences in size and weight are so great that in places where the plants are small and grow close together 10 plants have a weight of only one kilogram [=2½ pounds], while in the best territories some of the trees weigh as much as 3 kilograms each. The average weight will probably not exceed 500 grams [=1½ pound] per plant.

Estimates of the Guayule supply in large areas vary from 500 to 800 kilograms per hectare, but the distance between the different places where the plants are found are often considerable,

and must be taken into consideration. The territory containing the more important places of supply, include a total area of about 75,000 square kilometers [=about 29,000 square miles].

The Guayule, the only rubber producing plant belonging to the order of the *Compositæ* known at the present time, is distinguished from the other rubber producing *Euphorbiaceæ*, *Moraceæ*, *Apocynaceæ*, etc., by the peculiarity of its bark, which contains no milk sap. It appears that the rubber of the Guayule is dissolved in the sap of the cellular tissue, not only of the bark, but likewise of the wood. Only the shoots bearing the leaves and blossoms seem to contain no rubber, as experiments show that no rubber can be obtained from them by chewing them, while rubber may be obtained in this way from the other parts of the plant. Although considerably less rubber is produced from the wood than from the bark, the rubber contained in the wood is purer, and consequently lighter in color (amber yellow).

The relation between the amount of rubber contained in the bark and that found in the wood of the branches is approximately that of 7 to 2. The bark, moreover, contains aromatic substances of a balsamic character, and especially in separate ducts a gumlike product of degradation, which shows itself in drops on the surface whenever the plant has suffered an injury. The substance, which is similar to gum arabic and light in color, has hitherto been the cause of the stickiness of the Guayule rubber, and, consequently of its low market value.

As the crude material is difficult to break up or cut when fresh, it is worked after having been more or less thoroughly dried. In the dry climate of the Guayule districts it is usually sufficient to expose the gathered plants for a few days to the air, so as to prepare them for working. Various tests of the weight of dried plants showed that 100 parts were made up of 47 per cent. of wood and 44½ per cent. of bark, while there remained only 8½ per cent. of leaves and of the shoots of the previous year, a part of these being lost during transportation.

The price of dried Guayule plants, including freight charges, has hitherto been quoted at 15 pesos. At the present time, when several competing enterprises are about to acquire a larger supply of plants the price has risen to 30 and even to 40 pesos per ton, according to the distance between the places of origin and the stations or works.

For transportation by rail the Guayule is usually packed in pressed bales. The old method of shipping it in bulk had the disadvantage of requiring more labor. Besides, parts of it were often stolen at the stations, the people taking it for use as fuel.

#### EDITORIAL NOTE.

In the exhibits from Mexico at the Philadelphia Centennial Exhibition of 1876, the display made by the state of Durango included a specimen of good rubber stated to have been produced from a native plant of the genus *Cynanchum* of the natural order *Asclepiadææ*, according to Señor Fernando Altimarano, of Mexico city, to whom the plant had been sent for study. This appears to have been the first rubber from that region seen in the United States. In 1888 Mr. John H. Cheever, the founder and then treasurer of the New York Belting and Packing Co., imported from Hot Springs, 15 miles from Santa Rosalia, state of Chihuahua, Mexico, 100,000 pounds of a shrub known locally as "hule," from which the bark was removed and from the treatment of the latter a yield of rubber was obtained equal in weight to about 18 per cent., which Mr. Cheever regarded as equal to the best grade of "Centrals" in the market. On account of the freight charges the cost of the rubber produced by Mr. Cheever was equal to the current selling price of good "Centrals," and he was not interested in further experiments. This was probably the most extensive operation up to that time in producing rubber from the plant now known so widely as "Guayule." A report on Mr. Cheever's experiments appeared in THE INDIA RUBBER WORLD, April 10, 1895 [page 149].

## SUNDRY CRUDE RUBBER INTERESTS.

## A FRENCH RUBBER ASSOCIATION.

THE French Comité du Commerce et de l'Industrie de l'Indo-Chine have taken the initiative in the formation of a colonial rubber association, measures for completing the organization of which were taken at a recent meeting in Paris. The object is to lead to the utilization to the fullest extent of the rubber resources of France and her colonies.

The general plan for the association, presented by M. André Spiré, related (1) to completing a catalogue of all the rubber plants indigenous to the French colonies, with details as to their distribution, rate of yield, and value of their products; (2) the study of methods of exploitation, with a view to arriving at the largest possible profit from the exploitation of native trees; (3) the introduction of rubber culture, both of native and foreign species, based upon a study of the best cultural methods yet developed in any country; (4) the exerting of every proper influence to induce the coöperation of local authorities in the work here outlined; and (5) a propaganda in France in behalf of the use of colonial rubbers by the manufacturers of that country, as a means of extending their consumption, together with the establishment of a great French market for crude rubber.

M. Charles Duffart, of the *Revue Commerciale* (Bordeaux), was surprised at the apparent ignoring of the rubber market already existing at Bordeaux, where the imports had grown from 51 tons in 1898 to 1182 tons in 1904. He thought that, instead of attempting to create a new market, efforts should be made to acquaint consumers more fully with the advantages of buying through Bordeaux, where a market had been created at great effort and cost. Among things desirable to be done, according to the *Revue*, would be to bring the French colonial banks "to a more intelligent understanding of the commercial methods of the Belgian, German, and English banks which facilitate the negotiation of warehouse receipts for rubber, a practical business measure too often despised by us or looked upon as evidence of the embarrassment of the borrower."

## A GERMAN IDEA FOR BUYING RUBBER.

At a meeting of the German rubber manufacturers' association called last year to consider an advance in the price of rubber goods, a director of a factory not a member of the society submitted a proposition looking to the formation of a commission for the purchase of crude rubber and other raw materials, to consist of five, of whom four should be members of the Central Verein Deutscher Kautschukwaaren-Fabriken (the manufacturers' association). The meeting refrained from action on this proposition, which was referred to the directors of the society. Afterward the proposer presented plans for a purchasing commission in more detail, which may be summarized briefly as follows:

He implied that, on account of the business standing of the members of the society and the capital at their command, they were in a position to take in hand an interest most vital to their industry—the purchase of crude rubber in such large quantities as to obtain it at prices corresponding to those paid by dealers, and to become distributors at home and abroad to non-members so as to dispose of any surplus purchases at a profit. The buying of rubber would be conducted by a limited liability company formed for the purpose; it would not be necessary for members of the Central Verein to belong to this company, but those who desired to belong to the company

must first become members of the Central Verein. The shares of individual factories in the purchasing company would be regulated by their annual requirements of crude rubber.

It would be the business of the purchasing company to form satisfactory relations with the markets at Liverpool and Manabos, and eventually other points, and to create storage depôts at Hamburg and Antwerp, whence members would be informed promptly of actual or prospective arrivals, and be supplied with samples. The purchasing company would from the beginning give close attention to the matter of rubber culture in Ceylon and elsewhere, not with a view to establishing plantations, but to watch for favorable chances to buy such as might become productive. It was not intended that dealers in rubber should altogether disappear, but the formation of this buyers' union would from the outset prove a barrier against speculation in crude rubber, and the union would be from the start one of the most important of all rubber dealers, whose patronage would be sought by the producers of rubber.

## A FALLING OFF IN KASAI RUBBER.

OUR Brussels contemporary, *La Chronique Coloniale* (April 2), does not regard as particularly favorable the showing made by the Compagnie du Kasai (the Kasai syndicate) for the fiscal year ended December 31, 1904, although the company have announced an *interim* dividend of 50 francs for each one-tenth part of a share, and *La Chronique* is assured that the further dividend for 1904 will also be 50 francs, which will bring the total disbursement for the year up to 1000 francs for each full share. The company is constituted with 2010 shares—without designation of value—which would make the dividend amount to 2,010,000 francs [= \$387,930]. The net profit for the year amounts to 4,502,256 francs, but the disposition of the balance is not referred to.

The fiscal year of 1903 allowed of the distribution of a dividend amounting to 750 francs per share, and the preceding year a dividend of 250 francs. The Brussels paper says that while the dividend for 1904 certainly denotes an apparently prosperous condition, it would be wrong to infer that this condition could not be better. There was a production in 1904 of 1156 tons of rubber, against 965 tons in 1903, and only 265 tons in 1902. In 1902, however, the Congo Free State reimbursed the company, at the rate of 10 francs per kilo, to the extent of 1,000,000 francs in respect of certain rubber taken for account of the *Domaine privé*, and this sum permitted the payment of the dividend for 1902.

It is pointed out that the collection of 1156 tons last year was materially less than that of the total harvest of the 14 companies operating within the territories of the present Kasai company before the organization of the latter. [For a list, see THE INDIA RUBBER WORLD, July 1, 1903—page 344.] This harvest amounted to 1850 tons for the fiscal year immediately preceding the formation of the syndicate. The crop for the last fiscal year is about 700 tons less than this figure. "If," says *La Chronique*, "we consider that this result was obtained notwithstanding the exceedingly favorable privilege granted by a decree issued in April (1904) permitting the company to sell powder and guns it must be admitted that the activity in the exploitation of the domain under the Kasai company shows retrogression."

The cost price of rubber is not appreciably less than at the time of the simultaneous exploitation by the 14 rival companies.



But the enforcement of the decree of the Congo Free State prohibiting the crushing of rubber *lianes* was suspended for the benefit of the Kasai company, and this law cannot, therefore, be held responsible for the diminution in the rubber output of the Kasai region. It must be attributed to the fact that the exploitation has been confined to the previously worked territories and that the opening of new sections has not been attempted. *La Chronique* concludes: "The Kasai company is certainly living on its capital which, considering the future, is much to be regretted."

### "SIROCCO" DRIERS FOR CRUDE RUBBER.

THE problem that more than any other has been interesting the rubber planter of late has been the quick and thorough drying of the water filled discs of crude rubber. In the far East, and particularly in Ceylon, machinery is very generally used on the great plantations. In tea for example a factory is a part of each, and machinery for withering, rolling, drying, and packing is a part of the regular planting equipment. It is therefore most reasonable, when the tea planters turn to rubber culture and have a drying problem to solve, that they should test the tea driers. This they have done, and successfully.

The accompanying illustration shows a 20 tray "Sirocco" drier, similar to the tea drier in general use, but in this instance built for cinchona bark, cocoa, and coffee. The trays are of the end slide type, and are loaded at one end and discharged at the other. The trays are 6 inches deep, and run on small rollers. The machine shown has separate air and smoke chimneys but the two can be combined in one, as in the case of tea driers, if desired. The heaters are either "vertical" or "multitubular" and when it is desired an electric alarm thermometer is supplied with the machine so that the heat may be regulated with exactness.

Speaking generally of the "Sirocco" drier, they make use of a self acting upward current of heated air. This current is regulated within by air valves or by the operation of the smoke and air chimney, so that the greater the heat the stronger is the hot air current, which passes over all of the drying trays.

In practice, where rubber is the material to be dried, the wet pancakes are first dried in the machine described, for about 3 hours, at a temperature of 150° F. They are then taken to a room above the drier where the warm exhaust air is collected and spread on wire mesh trays where the drying is finished. Manufactured by Davidson & Co., Limited, Belfast, Ireland, with branches at Calcutta and Colombo.

#### PLANTING NOTES FROM THE FAR EAST.

THE area planted to rubber in the Federated Malay States is estimated, in a note in *The Tropical Agriculturist* (February 1, 1905) at 25,551 acres. It may be mentioned here that the

administration report for 1903 of the state of Perak alone says that there must be 25,000 acres under rubber in that state. The report states: "There are over 18,000 acres in Lower Perak, and about 4000 acres in Krian. Of this acreage the area owned by Europeans may be set down at about 7000 acres."

=The *Singapore Straits Times* (April 28) reports having seen exceptionally fine specimens of cultivated *Hevea* rubber from Bertram estate, Province Wellesley (Malay peninsula), which embraces 300 acres planted to rubber, of which 3 acres, covered with 7 year old trees, are now being tapped. Bertram estate is owned by Bim Eow Hong, Quah Beng Ho, and T. Gawthorne.

=It now appears that the Grand Central Ceylon Rubber Co., Limited (Colombo), will not be organized on the lines indicated in THE INDIA RUBBER WORLD of June 1 [page 300], on account of the failure to complete negotiations for acquiring the Sabaragamuwa lands of 15,000 acres. The company will, however, proceed with the acquisition of the Urumewella estate, already partially planted with rubber, and a new prospectus is expected to be issued.

#### NEW COMPANIES.

RUBBER Estates of Ceylon, Limited, registered in London, April 11, 1905, with £100,000 [= \$486,650] capital, to acquire the Muwankande estate, in the Kurunegala district of Ceylon, and the Mousava estate, in Galagedara district, the two estates comprising 968 acres and the latter containing at last accounts 10,000 rubber trees planted in cacao—and other properties in Ceylon and elsewhere, and to plant rubber and other products.

=Palmadulla Rubber Co., Limited, registered in London, May 23, 1905, with £60,000 [= \$291,990] capital, to acquire the Geragama tea estate, in Central Province, and other properties in Ceylon, and to grow tea, India-rubber, and other products. H. K. Rutherford, mentioned hitherto in these columns in connection with various Ceylon plantations, is one of the original directors, and a holder of 500 £1 shares. Registered offices: 10-11, Lime street, E. C., London.

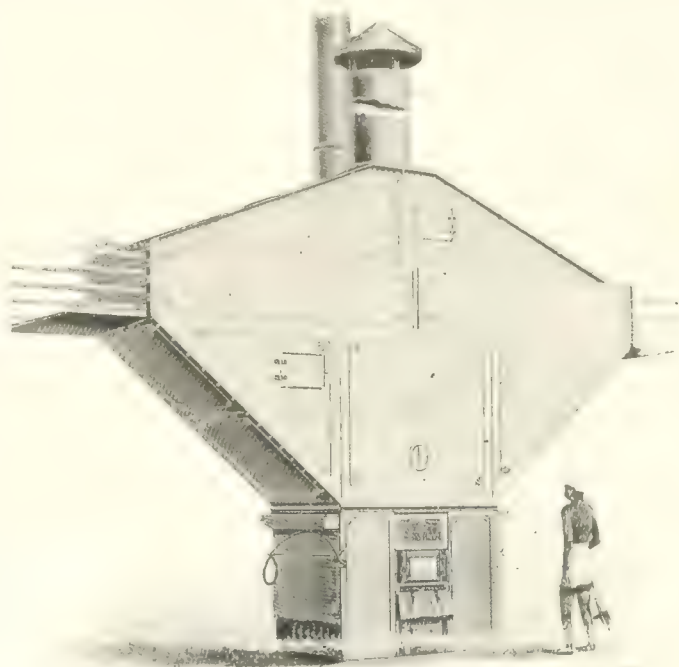
=Kuala Selangor Rubber Co., Limited, registered in London, May 12, 1905; capital, £12,000 [= \$58,398], in £1 shares; to adopt an agreement with L. T. Bonestead and W. A. Horn, and to carry on the business of rubber planters in the Federated Malay States.

=The Malay Peninsula Agricultural Association recently invited the submission of essays on rubber to be forwarded not later than July 1 to the secretary at Penang. A gold medal, with \$50 in cash was to be given for the best essay on Pará rubber, its cultivation, methods of tapping, and manipulation of the latex, and a similar prize for the best essay on Gutta-rambong (*Ficus elastica*).

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#### RUBBER PLANTING COMPANY PUBLICATIONS.

THE Tehuantepec Rubber Culture Co., New York.—Report of the Official Inspector [Theodore M. Bates]. 18 pages.



"SIROCCO" DRIER FOR CRUDE RUBBER.

## THE INDIA-RUBBER TRADE IN GREAT BRITAIN.

*By Our Regular Correspondent.*

THE London County Council, a most important buying body, has got out a full set of specifications for the various rubber goods purchased, and considerable strictness is shown in seeing that deliveries correspond to the specifications. There have been cases recently where manufacturers have had goods rejected but it seems to have been quite their own fault. Having discussed the matter generally with some members of the trade I took an opportunity which presented itself recently of interviewing an official whose position entitles him to speak with authority. It was not their wish, he said, to act at all harshly; they merely wished to have uniformity in delivery, and nothing was said where the discrepancies were but slight. They were always glad to discuss any matter of complaint with the manufacturer's chemist but they could not agree to the proposal that the certificate of an outside analyst should be put in. My informant took it that all the principal works had their own chemists but I informed him that this practice was not universal, and that firms who had important rubber contracts had what analytical work they required done outside. A great trouble, he said, was the constant change of contractors, their experience being that new comers took some time to conform to the letter of the specifications. He also expressed the opinion that firms tendered at prices which could hardly pay them in order to be able to advertise themselves as being contractors to the Council. This may probably be so, but it must not be overlooked that the cost of production is not the same with individual firms, and one may make a profit where another would show a loss. Again with regard to this point I know of one case for certain where a firm got the contract and carried it out at a loss owing to a clerical error in their quotations. It was quite foreign to their intention to undercut in this way and their next quotation, all the more if rubber should have fallen, will doubtless cause some surprise if not another of those changes which are considered undesirable.

AS far as the home trade is concerned there is nothing to report except stagnation. With regard, however, to the shipping trade, it is noteworthy that the South American market is good and shows a considerable increase of business during recent years. The demand is almost entirely limited to high quality goods, pure Pará proofing being very prominent in an attractive lot of samples which I recently inspected, destined especially for this market. As an instance of the unsatisfactory position of the trade the recent report of Messrs. Birnbaum, of Hackney Wick, London, may be mentioned. This firm is one of those whose business is confined to the proofing branch and it is not surprising that they have felt the altered condition of affairs more acutely than firms like Macintosh's and the North British, who have so many departments that slackness in one of them may easily be counterbalanced by briskness in another.

I HAVE heard of two applications of waste rubber which are novel to me, but beyond what has been told me I have no personal knowledge of how far they have been successful. In the first the old vulcanized rubber is melted up and applied to structural ironwork as a rust preventer. The idea, I understand, comes

from Denmark and is being exploited by a company having a works near Belfast, Ireland. The other application was made known to me in a London drawing room by a retired officer who had been "approached" with a view to his taking a monetary interest in it. In this case the old rubber was to be melted on a basis of wire gauze and the product applied as a boiler covering in place of the fibrous or mineral coverings commonly in use. The new covering was stated to be already in use in various industrial centers. As I have said I only know of these new applications by hearsay, but in case the scepticism which I have is ill-founded and an erroneous impression be caused by these remarks, I am sure that any disclaimer from parties primarily interested will receive due attention if sent to the offices of this Journal.

THE speculation which has long been rife as to the personnel and location of the British Michelin company has now been ended by the announcement of the formation of the Michelin Tyre Co., Limited. The capital is £60,000, in £10 shares, and it is really a private combination between the French house of Michelin and Warnes, of Tottenham, England. Such a union augurs success on account of the high reputation of the individual firms. So far, however, Warnes, prominent as they have been in the solid cab tire business, have not been known or at any rate not prominently with regard to motor tires. This is patent from inquiries made to me by motorists who are familiar enough with the names Dunlop, Moseley, and North British. "Who are Warnes?" is a common expression in motoring circles. One would have thought that the well known red tobacco pouch would have removed any tendency to such ignorance, but the fact remains that there is room for enlightenment. As far as I can judge the new company will find the Continental company of Hanover their principal competitors for the custom of the general motorist.

QUITE a big business, and I should imagine a profitable one, is being done by The B. F. Goodrich Co. (London) in the supply of the necessities for repairs. In fact, the motorist, besides developing as an engineer, is rapidly becoming versed in the mysteries of the rubber trade. The portable vulcanizer, something on the lines of the cable jointer's apparatus, is coming into increased use, and no doubt proves of much service where rubber works are at a distance. With regard to that important commodity, rubber solution, I hear a good many complaints to the effect that it is not as strong as it used to be. This complaint is no doubt well founded, as there has been a tendency of late years to reduce the amount of rubber. I should judge this to be a rather mistaken policy. The owner of a motor car or a motor cycle is not likely to be particular to a few pence as to the price he pays for his solution. At any rate he expects to get stuff that will do the work, and if a weak substance is put on the market in order to meet competition, the buyer's attention should be drawn to the fact that he can have a better quality by paying for it. A few years ago the cyclists' solution used to contain 15 per cent. of rubber, all of it, moreover, Pará rubber. Now the rubber content has been considerably reduced and the rubber is half African. I notice that another firm besides the one recently burnt down at Bradford uses bisulphide of carbon as the solvent instead of naphtha. This firm which is situated in the

OFFICIAL  
SPECIFICATIONS.THE  
PROOFING  
TRADE.THE MICHELIN TYRE  
CO., LIMITED.TIRE REPAIR  
OUTFITS.NEW USES FOR  
WASTE RUBBER.



Birmingham neighborhood takes the precaution of labelling the collapsible tubes highly inflammable, a very necessary precaution seeing how ignorant the great bulk of the purchasers are of the nature of this mephitic liquid.

THAT there is a new boom in the Coventry cycle trade is a fact, but whether the manufacturer's profits will be at all in accord with the rush of business is a matter which admits of much speculation. Of course the boom has been primarily induced by the great reduction in prices, but I am informed that it is not the cheapest machines which are experiencing the greatest demand. It is the old £25 machine now reduced to a little more than half that amount in which the bulk of the business is being done, according to a report from the seat of the trade which should be trustworthy.

FOR many years the cry of the jobber has been for a ball that will show up white when chipped or indented. This desideratum was never attained by the coating of white paint, and the much vaunted process of bleaching the gutta before use met with very partial favor or success. In the ball recently put on the market by the Spalding company, I understand that the desired end has been attained and that the white color of the gutta remains permanent whatever amount of belaboring the ball may undergo on the links. The ball is of the rubber cored type and at present is being sold at the somewhat elevated price of 2 shillings 8 pence each.

AS I write, this interesting case has not yet come to a conclusion, though it has already extended over several days at the chancery courts in London. Under the circumstances, therefore, I am precluded from comments save as to generalities. From what individual golfers tell me, the Kite ball is nothing like so good as the Haskell, and the latter need not fear any serious competition. As regards the merit of the case a rubber manufacturer of some note assures me that the Hutchison side ought to win—that is, if their case is put to the best advantage. In his subsequent remarks as to it being the lawyers rather than the facts which generally decide their case other litigants will no doubt acquiesce. The legal columns of *The Times* have hardly noticed the case and the references in other dailies have been but slight.

I HAVE nothing new to say of this department though it may be mentioned that by general report the business of such firms as the Pluviusin Co., The New Pegamoid Co., and various others in the same line is showing continued progress. It has naturally taken some time for these products to make headway against leather, but they have now satisfactorily established their advantage both as regards durability and price.

IT is very exceptional for marine insurance companies to have claims made against them for rubber damaged in transit, though there was a case a few years ago where the rubber was stated to have been damaged by sea water. The claim was not a large one and the company paid up sooner than resort to litigation. To my mind, however, it is difficult to see how the salt water could have been injurious; at any rate plenty of expert evidence could have been obtained to show that saline solutions are regularly used in the coagulation of the rubber milk. With regard to the insurance of rubber cargoes from Brazil it is easy enough to effect them from Pará or even Manáos, but with respect to what comes from the interior to Manáos I am informed that no English house will take the risk, despite the efforts put forth by importers. It is stated in insurance circles, though

I cannot vouch for the truth of the statement, that owing to lack of supervision a good deal of rubber is thrown overboard during the tortuous river passages to be afterwards gathered up by the wily participators in the movement. It is recognized at home that adequate supervision is not to be expected but until greater efforts are made in this direction than are apparent the insurance people will continue to hold aloof.

COLONEL SIR ROBERT BRIDGFORD, V.D., K.C.B., who died recently held for a few years the post of director of Messrs. Charles Macintosh & Co., Limited, being elected thereto by reason of his general business attainments, though he had had no previous experience of the rubber trade. His military service was confined to the volunteers movement, in connection with which he was probably better known at the war office than any officer of the service.

THE reference in the May issue of this Journal to the new rubber cable being made by the Safety Insulated Wire and Cable Co. (New York) for Mexican waters is interesting as bearing further testimony to the importance of vulcanized rubber in this direction.

There are still plenty of doubting people who disparage the use of rubber in deep sea work and ignore its triumphs. The statement that the evil disposed *teredo* lets rubber alone while attacking Gutta-percha is interesting. Is the fact to be explained by the greater toughness and elasticity of rubber rendering an attachment difficult, or is it that there is something too medicinal about the sulphur?—I am not aware how that very destructive insect, the white ant of the tropics, regards rubber from a dietary point of view, but according to what I have been told by Royal engineers, it makes short work of Gutta-percha, it being found necessary to encase the shore ends of cables in metallic armoring.—In discussing electrical cables the other day with an engineer, I remarked that rubber cables of course only had a certain life; his rejoinder was that they had such an uncertain life, and it was due to this uncertainty that the bituminous and fibrous insulation had made such advances. At the same time it was conceded that each insulating material had its advantages for special classes of work, and the vulcanized rubber cable is holding its ground well. With regard to mining applications where the conditions with respect to moisture and rough handling are so trying, there is considerable divergence of opinion as to the most suitable type of cable.—The New Gutta-Percha Co., which controls the Gentsch patents, has had satisfactory reports of their Pernax insulation which has been under trial at Edinburgh for 18 months, and which has also been adopted to some extent on the London County Council tramways.—One of the electrical journals recently had an advertisement for an electrician who has a thorough knowledge of mishaps to cable systems, particularly from electrolysis. I should think that a man of such attainments would not be easily obtained. The causes of a good many breakdowns are wrapped in obscurity, and while the method of putting things right may be straightforward enough, the explanation of the trouble generally remains in abeyance. A man who can at once solve such problems ought to be worth a good deal more than the low salaries which are now so general in the electrical engineering profession as a direct result of overcrowding.

A TIRE PUNCTURE.—A puncture is a trifle, and a trifle is a scrap, and a scrap is a fight, and a fight is a battle, and a battle is war, and war is what General Sherman called it. Therefore, a puncture is the same. [Attributed to R. D. Chapin, sales manager of the Olds Mobile Works.]

THE  
BICYCLE  
BOOM.

SIR ROBERT  
BRIDGFORD.

ELECTRICAL  
MATTERS

THE SPALDING  
GOLF BALL.

HASKELL  
GOLF BALL CO.  
VERSUS HUTCHISON.

ARTIFICIAL  
LEATHER.

INSURANCE OF  
RUBBER FREIGHTS.

## THE LATEST WATERPROOF AUTOMOBILE APPAREL.

**F**AIR followers of the sport of motoring enjoy their runs into the country ten-fold as well as they did a few years ago, and for this increase of pleasure the tailors are to be thanked. For they have combined beauty and utility in motoring coats in a way that must delight the heart of every normal woman.

As soon as the automobile began to take its place in the world of true sport, the women to whom it appealed united in a wail, to their tailors and hat makers, of "What shall we wear? We must have something that will defy rain, wind, and dust, and yet be pretty and smart." The tailors racked their brains to think of a material that would fill the bill and brought forth suits of leather, which although serviceable were too heavy, especially for warm weather, and lacked the smart touch without which no garment may hope to find favor in a woman's eyes.

At this crisis rubber waterproofed goods began to be considered favorably as a material from which to fashion automobile coats. There was a time, of course, when rubbered goods

good satin and the under side has the usual rubber finish. Such goods is of delightfully little weight and lends itself admirably to plaiting and stitching.

A Broadway shop noted for its selection of fashionable automobile apparel recently has exhibited several styles of women's coats of this material which appear especially worthy of description. The most striking model is a redingote of bright scarlet satin rubber, made with a blouse back and front, gathered on a white satin rubber belt. It is double breasted and made with full sleeve plaited in to wide white satin cuffs. The military collar is also of white and the buttons that extend in two rows down the front are of gun metal filled in with red satin. This coat is one of the novelties of the season in Paris. It has not been seen before in New York, but the dealers say that it bids fair to be popular, notwithstanding its delicate colors, for it seems to be a good dust shedder.

Another model of satin rubber which has found favor with



LONG COAT FOR WOMEN.  
[Silk Rubber.]

SUIT FOR WOMEN.  
[Silk Rubber.]

TOQUE-POKE BONNET.

LONG COAT FOR MEN.  
[Silk Rubber.]

AUTO SHIRT FOR MEN.  
[Cambric Rubber or Silk Rubber.]

held first place among waterproof coats—in the days when the mackintosh ruled supreme. As everybody knows, however, the trade in the goods declined, in favor of cravenetted and other rainproof coats. But the automobile has brought the rubber waterproof back on a great wave of popularity, so that now it is far and away the favorite material for touring costumes. Today the rubber proofed garments are to be seen at the seashore, in the country, and on every city street where the well appointed automobile finds its way, and for a combination of grace and utility, they excel all others.

Because of the impetus which motoring has given to this use of rubber, a number of novelties have been put on the market recently and are proving most acceptable to automobile devotees, both men and women. What is known among tailors and dealers in automobile apparel as satin rubber is one of the newest importations. The outside looks like a piece of unusually

French women is a three-quarter length coat in gray, piped with brown leather. This is made on the Empire style with a yoke and skirt, the skirt being put on to the yoke in knife plaits; and just at the back it is fashioned into a box plait.

A third automobile coat which has come lately from Europe is of champagne satin rubber, made full length. It is single breasted, trimmed with gold and brown enamel buttons, with the box back held close by a wide belt. This coat is furnished with two large pockets, one on each side of the front, with large flaps to protect the contents from dust. The sleeves are made with one box plait extending to the elbow, where the goods is puffed. Below the puff are two smaller plaits which continue to the wide cuffs, under which are dust cuffs clasped tight to the wrist by elastic bands.

But New York women of late have been buying silk rubber garments almost exclusively for automobile wear. Gray, blue, champagne, and red are the favorite shades, and the styles are quite bewildering, both in variety and smartness. For a

NOTE.—All the cuts on this page and the next are made by the artist and Messrs. Saks & Co., Herald Square, New York.



long coat—and it is to the full garments that one invariably leans—nothing could well be more fetching than one which is pictured here. It is of the tan silk rubber, made very full, with large bishop sleeves, which make it possible to be worn over an elaborate gown without disastrous effects. The charm of this coat is in its simplicity, for its sole trimming consists of a series of box plaits which form a yoke and which extend over the shoulders and down both sides of the front to the bottom of the garment. The back is made in the loose box style, confined by a wide belt.

Another model which is seen in Broadway shops appeals at once because of its practicability for long motor trips. It is a full length coat in dark blue silk rubber, made with storm collar and dust cuffs, and trimmed with Danish leather of the same shade. Its chief point of excellence is its manner of fastening. It buttons down the center on a false fly and again at the extreme right, thus protecting the wearer from wind and dust.

Grey silk rubber is the material used in the automobile suit of three-quarter length jacket and skirt which is shown here. The coat is a box style with a full belt and a fancy stitched yoke, extending in points over the shoulders and down the back; and the circular skirt has two wide straps of the fabric stitched on both sides and trimmed with black buttons. The large sleeves have tab ends finished off with buttons.

In men's automobile garments the silk rubber in grey, brown, or navy blue is most often seen. The two models here illustrated are good examples of motoring styles for men. Probably no other garment of its kind has met with as much favor as this long coat model. It is pleasing to the eye as well as a splendid protection from the elements. The coat is single breasted in reality, buttoning down the center on a false fly,

but a double breasted effect is given by the flap which extends over to the extreme right when it buttons all the way down to the edge of the coat. A ball and socket fastener confines the extreme end of the wide skirt.

Men seem to consider the "auto shirt" one of the cleverest garments that have yet been designed for them. This may be had in plain black rubber or in the more expensive and prettier silk rubber of single texture. It is made to slip on over the head, and by this precaution obviates all chance of dust sifting through to the clothes beneath. The shirt and the

full sleeve of this garment are each in one piece.

No description of automobile garments for men's wear would be complete without mention of the poncho coat—made in one circular piece extending a little below the knees and without armholes. By this arrangement the arms are kept entirely under cover and the skirt is made with such a wide sweep that the wheel of the machine may also be protected. The entire yoke of this coat is elastic and to the body of the garment a hood is fastened, which has an ingenious arrangement of straps and fasteners that allow it to be quickly drawn over the hat and about the face.



MEN'S RUBBER PONCHO FOR MOTORING.

Rubber waterproofed material has become no less popular for caps and hats for both men and women motorists. For the "Yankee" cap, the brim of which is turned down to protect the back of the head; for the tourist cap, which has a long head and face shield in which goggles are inserted, and for a dozen other styles in caps for automobile wear, rubber is indispensable, while its use for hats has changed the automobile millinery question for women from a bore to a pleasure.

The toque-poke bonnet pictured on page 341 is only one from a large variety of pretty fashions of headwear for the fair tourist. This particular bonnet, designed by a French milliner, is of navy blue silk rubber trimmed at the front with chiffon rosettes. By a simple arrangement of elastic bands the flexible brim, which shields the ears and hair during a trip, may be turned up and fastened, thus connecting the poke bonnet with a fashionable toque. Such a model as this has no small part in converting public opinion from the old idea that to be a motorist a woman must look like a fright.

HELEN L. STOUT.

## RUBBER FROM THE ISLE OF PINES.

FOR some time past a report has been rife that there were valuable rubber trees on the Isle of Pines, near Cuba, and many interesting stories have been told concerning them. Some months ago THE INDIA RUBBER WORLD undertook to discover exactly what tree or vine on the island produced rubber, if any, and while so far neither bark, leaves, or fruit, or indeed a description of the tree have been received, a bottle of latex was secured, and its rubber contents have been carefully appraised. In coagulating this latex, the best process seemed to be a simple air drying, as neither acids nor alkalies affected coagulation any better than did exposure to the air, while the addition of alcohol to the latex gave only a moderately successful result. The gum itself at best was very sticky and would hardly bring more than African paste in the market. Submitted to Professor S. P. Sharples of Boston, for analysis, the report was that the article was more in the nature of a gum resin than of a rubber, nearly the whole of it being soluble in alcoholic potash and also in acetone. Taking into account that labor is high priced in the Isle of Pines there is very little reason to think that even if the gum proved itself to be useful to rubber manufacturers, that is, if it would take up compounds and vulcanize, it would be too cheap to gather profitably.



LAP AND FOOT ROBE.

[Covert or Serge Mackintosh Cloth, or Cambrie Rubber.]

# GOODRICH RUBBER GOODS AWARDED



## GRAND PRIZE HIGHEST AWARD



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Manufacturers of the highest grades of

## ALL KINDS OF HOSE

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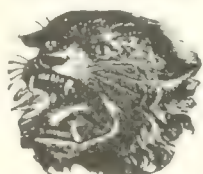
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**THE MECHANICAL RUBBER CO., 230 Randolph St., Chicago, Ill.**

*Mention The India Rubber World when you write*

## BRAZIL'S EXPORT OF RUBBER FOR FOUR YEARS.

[ALL FIGURES INDICATE KILOGRAMS.]

## PARA RUBBER (INCLUDING CAUCHO).

PORTS.	1901.	1902.	1903.	1904.
Manaos .....	15,679,929	13,706,317	16,499,519	15,331,869
Itacoatiara .....	14,112	4,744	.....	2,175
Pará .....	13,467,493	13,406,639	12,559,057	13,171,212
Maranhão .....	.....	.....	109	13,410
Ilha do Cajueiro .....	.....	.....	1,972	18,341
Porto Murtinho .....	.....	.....	2,740	3,800
Corumbá .....	211,974	386,578	255,168	251,396
Total .....	29,373,138	27,474,278	29,318,655	28,792,266

## CEARA RUBBER ("MANICOBA").

PORTS.	1901.	1902.	1903.	1904.
Pará .....	2,050	2,402	950	2,439
Maranhão .....	3,881	.....	27,308	11,471
Ilha do Cajueiro .....	164,882	362,691	632,858	503,871
Ceará .....	232,607	268,943	517,824	668,809
Cabedello .....	.....	.....	.....	1,923
Pernambuco .....	42,900	24,215	41,333	97,556
Maceió .....	.....	.....	.....	180
Bahia .....	23,676	143,941	496,224	939,157
Rio de Janeiro .....	.....	.....	5,397	680
Santos .....	2,921	.....	.....	.....
Natal .....	.....	6,096	.....	.....
Total .....	472,917	807,388	1,721,894	2,216,077

## MANGABEIRA RUBBER.

PORTS.	1901.	1902.	1903.	1904.
Pará .....	478	249	1,896	541
Maranhão .....	9,047	11,319	3,214	6,301
Ilha do Cajueiro .....	58,037	16,424	28,100	35,316
Ceará .....	436	226	3,996	6,935
Cabedello .....	704	.....	15,354	22,863
Pernambuco .....	81,341	96,456	97,849	85,034
Maceió .....	80	519	11,543	10,420
Bahia .....	176,094	174,922	355,291	415,579
Rio de Janeiro .....	26,853	11,563	43,457	85,195
Santos .....	35,406	12,473	62,588	128,991
Porto Alegre .....	.....	.....	.....	350
Paranaguá .....	3,198	.....	.....	.....
Porto Murtinho .....	.....	.....	400	1,300
Corumbá .....	28,864	26,043	57,893	56,383
Total .....	394,588	350,194	661,581	855,208

Grand Total 30,240,943 28,631,860 31,702,130 31,863,491

## BRAZILIAN RUBBER EXPORTS, BY PORTS.

	1901.	1902.	1903.	1904.
a Amazon ports .....	29,163,972	27,120,351	29,061,422	28,508,227
b Atlantic ports .....	836,113	1,128,888	2,344,507	3,042,385
c Interior ports .....	240,858	382,621	296,201	312,879
Total .....	30,240,943	28,621,860	31,702,130	31,863,491

a Pará, Manos, and Itacoatiara.

On the Brazilian coast, from Cabedello and Maceió.

b Corumbá and Porto Murtinho, on the river Paraguay, including also the Foz de la Platte, and representing the staple exports to Uruguay and Argentina.

## DESTINATION OF EXPORTS, 1904.

COUNTRIES.	Para Rubber	Manicoba	Mangabeira	Total.
United States .....	15,968,753	624,039	280,580	16,873,372
Great Britain .....	10,420,532	1,365,218	273,753	12,059,503
France .....	1,455,060	51,704	23,796	1,530,560
Germany .....	393,749	174,216	214,805	782,770
Belgium .....	282,376	900	4,591	287,867
Italy .....	16,540	.....	.....	16,540
Argentina .....	37,742	.....	.....	37,742
Uruguay .....	217,454	.....	57,683	275,137
Total .....	28,792,206	2,216,077	855,208	31,863,491

THE federal bureau of statistics of Brazil, organized some four years ago under the administration of Mr. J. P. Wileman, editor of *The Brazilian Review* (Rio de Janeiro), has been developed under his charge to a high degree of efficiency, which renders available now commercial statistics more complete and accurate in character, and much more promptly, than at any time in the past. THE INDIA RUBBER WORLD has been favored, by the office referred to, with detailed statistics of the exports, during the calendar year 1904, of India-rubber produced in Brazil, which are summarized in the next column, in connection with the corresponding returns for three years preceding.

Hitherto the statistics available of exports of Brazilian rubber have related mainly to the output from the Amazon, only fragmentary details coming now and then from the Atlantic ports south of Pará. In any comparison of the present figures with the statistics issued from Pará, it should be kept in mind that the latter embrace all rubber exported from the Amazon, whatever the source, whereas Mr. Wileman's reports relate solely to rubber produced in Brazil.

Without going into detailed comparisons it may be said that various sections of the Rio tables agree as closely with figures hitherto accepted in the trade as credible as could be expected in the case of returns compiled on different systems and, in a measure, from independent sources. This comment, by the way, is made with a view to calling attention to the growing completeness and trustworthiness of statistics relating to crude rubber the world over. This is a matter of importance in connection with the market prices of crude rubber at any time, and all the more so in the present era of extreme high cost of this material.

An analysis of the accompanying figures suggests the following points:

1. Brazil's production of rubber during four years has shown a slight increase—from 30,240 to 31,863 tons.

2. The output of "Pará" rubber (including a small amount of Cauchó) has declined—from 29,373 to 28,792 tons.

3. The net increase has been due mainly to "Ceará" rubber—from 472 to 2216 tons.

4. The Amazon ports show a decrease—from 29,163 to 28,508 tons.

5. The southern Atlantic ports (hitherto unimportant as regards rubber) show a considerable increase—from 836 to 3042 tons.

6. It must be evident, from the preceding figures, that any increase in the output of rubber from the Amazon during the past four years has been due to an increased production in other countries than Brazil—that is, Bolivia and Peru—and as shown in THE INDIA RUBBER WORLD of May 1, 1905 [page 260], the percentage of "Cauchó" in the yearly totals is becoming larger rather than smaller.

7. The table gives color to the hope that some of the Brazilian states south of the Amazon valley proper may yet become rubber producers to an important extent, including the production of the so-called "Pará" rubber.

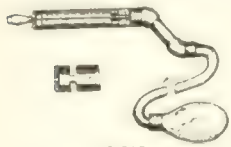
There is to be added to the total in the table herewith the item of Massaranduba gum (allied to Balata) of which there was exported from Pará 4315 kilograms in 1903 and 2062 in 1904. Last year's exports were distributed thus: Great Britain, 959; France, 776; United States, 327.



## RECENT RUBBER PATENTS.

## UNITED STATES OF AMERICA.

ISSUED MAY 2, 1905.

- N**O. 788,520. Hand stamp. F. W. Collins, New York city.  
 788,568. Machine for applying nipples to hose. H. H. Welsh, Jr., Wilmerding, Pa., assignor to The Westinghouse Air Brake Co.  
 788,569. Machine for applying hose to couplings. *Same*.  
 788,577. Veterinary injector. G. B. Blackman, Chattanooga, Tenn.  
 788,600. Hose coupling. T. C. Rogers, Sistersville, W. Va.  
 788,710. Vehicle tire. [Pneumatic.] P. E. Doolittle, Toronto, Canada.  
 788,711. Vehicle tire. *Same*.  
 788,757. Atomizer. H. C. Deeks, Paterson, N. J.  
 788,765. Pneumatic tire. C. S. Frank, Epworth, Iowa.  
 788,769. Packing. E. D. Harsen, assignor to himself and C. Leedham, both New York city.  
 788,824. Resilient vehicle tire. G. B. Dryden, Chicago.  
 788,910. Billiard cue. [A cue comprising a cylinder, a cue stick operating therein, a rigid deflected connecting portion at the butt end of the cylinder, and an air compressor and tube connecting the same with the deflected connecting section.] C. S. Jones, Indianapolis, Ind.
- 
- 788,910. Machine for applying clips to hose. W. A. Walker, Baltimore.  
 788,969. Machine for applying clips to hose. *Same*.  
 788,983. Armor for pneumatic tires. R. Wright, Cleveland, Ohio.  
 788,996. Elastic stocking. W. Böttger, Jr., Apolda, Germany, assignor of two thirds to A. Leirich, Berlin, Germany, and W. Dobermann, Schenectady, N. Y.  
 788,997. Method of making elastic knitted fabrics. *Same*.  
 789,024. Automatic tire charging pump. J. M. Hibbard and A. C. McCord, Chicago.  
 789,089. Reversible heel attachment. C. O. Frank, assignor of one-half to W. N. Harper, both Port Huron, Mich.  
 789,092. Syringe. G. A. Hulett, Ann Arbor, Mich.  
 789,118. Composite boot or shoe. [Leather upper and rubber sole.] G. F. Butterfield, assignor to G. I. Butterfield, both of Boston.

ISSUED MAY 9, 1905.

- 789,411. Piston rod packing. A. W. Chesterton, Boston.  
 789,145. Fireman's uniform [including a respirator]. J. Derx, St. Louis.  
 789,412. Wheel tire. J. S. Cushing, Norwood, Mass.  
 789,428. Life preserver [comprising a glove and sleeve for the forearm]. T. J. Hruby and T. J. Jirik, Chicago.  
 789,464. Rubber tire setting machine. E. B. Tragler and W. R. Harris, Akron, Ohio; Harris assignor to Tragler.  
 789,510. Tip for chair legs, etc. G. R. Stetson, New Bedford, Mass.  
 789,532. Fountain pen. D. F. Gallagher, New York city.  
 789,564. Vehicle tire. T. W. Ranson, Jr., Cleveland, Ohio.  
 789,606. Tire. M. S. Gordon, Austin, Tex.  
 789,621. Overshoe. C. P. Mattewson and C. W. Schell, Cleveland, Ohio.  
 789,651. Electrical conductor. C. L. Burlingham and W. J. Burton, Chicago; assignors to Burton and J. M. Burlingham.  
 789,652. Switchboard cord. W. J. Burton, Chicago, assignor of one-half to J. M. Burlingham.  
 789,686. Device for waving the hair. Mabel G. Dunlap, New Rochelle, N. Y., assignor of one-half to Frank Moss, New York city.  
 789,689. Hose coupling. E. H. Gold, Chicago.

ISSUED MAY 16, 1905.

- 789,718. Machine for applying adhesive or other coatings to sheets. J. P. Curtis, Everett, Mass., assignor to United Shoe Machinery Co.  
 789,890. Rubber stamp. J. F. Tenney, Chicago.  
 789,931. Tool for repairing pneumatic tubing. E. F. Pawasarat, Sheboygan, Wis.  
 789,937. Rubber tire fastening for wheels. G. T. Reed, assignor of one-third to A. H. Beimschla, both of Baltimore.  
 789,948. Armored flexible tubing. E. T. Williams, Duluth, Minn.

- 789,986. Pneumatic tire shield. J. Marsden, San Francisco.  
 790,033. Process of making dress shields. T. Davis, New York city.  
 790,051. Breast pump. H. H. Halstead, assignor of one-half to S. L. DeGarmo, Poughkeepsie, N. Y.  
 790,057. Respirator or inhaler. J. L. Hively, Elkhart, Ind.  
 790,101. Fountain pen. J. Blair, Brooklyn, N. Y.  
 790,102. Automatic setter for air brakes. W. H. Brooks, West Point, N. Y.  
 790,114. Vehicle tire fastener. A. L. Dixon, Buffalo, N. Y.  
 790,176. Hose drying device. C. M. Bowman, assignor to The Rotary Fire Hose Co., both Lebanon, Pa.  
 790,237. Nose guard. F. A. Wilson, Jeannette, Pa.  
 790,252. Golf ball. L. J. Du Mahaut, assignor to L. J. Du Mahaut Co., both New York city.

Trade Mark.

883. Rubber reclaimed from waste rubber. The Alkali Rubber Co., Akron, Ohio. *Essential feature*.—The word ALKALI on three rubber leaves arranged in fleur-de-lis fashion.

ISSUED MAY 23, 1905.

- 790,279. Pneumatic tire [with puncture preventing band]. R. Bellingham and J. Bloomfield, Beccles, England.  
 790,282. Packing. A. C. Brantingham, Toledo, Ohio.  
 790,318. Atomizer. W. Sams, Chicago.  
 790,398. Process of constructing golf balls. F. H. Richards, Hartford, Conn., assignor to Perfect Golf Ball Co.  
 790,404. Tire for vehicles [comprising a series of resilient annular tubes tangent one to another and arranged concentrically around a common central tube and tubes lashed together at intervals throughout the circumference thereof]. G. S. Squires, Boston.  
 790,401. Mold for making rubber balloon bags. H. B. Faber and H. E. Seal, New York city, assignors to Rubber Balloon Co. of America.  
 790,558. Composite boot or shoe. G. F. Butterfield, Boston, assignor to G. I. Butterfield.  
 790,596. Fountain pen. F. E. Shaw, Ewart, Mich.  
 790,638. Hose coupling. J. F. Foy and J. Clark, Lock No. 3, Pa.  
 790,646. Tire [pneumatic]. F. Mesinger, New York city.  
 790,660. Toy. O. A. Prior, assignor to J. C. Stuetzer, Detroit, Mich.  
 790,682. Life preserver. S. Friedman, assignor of  $\frac{1}{16}$  to H. Moscovitch, both Paterson, N. J.  
 790,685. Hose coupling. M. Hendricks, Benwood, W. Va.  
 790,742. Vehicle tire. T. R. Palmer, Erie, Pa.  
 790,874. Fire plug hose hitch. J. Donovan, Braddock; H. McGrory, Wilkinsburg; and G. J. Vogel, Pittsburgh, Pa.; assignors to sundry persons.

Trade Marks.

1619. Rubber boots and shoes. Lambertville Rubber Co., Lambertville, N. J. *Essential feature*.—The words TOP SAWYER.  
 1621. Rubber balls. Lambertville Rubber Co., Lambertville, N. J. *Essential feature*.—The hyphenated word HIGH-FLYER.

[NOTE.—Printed copies of specifications of United States patents may be obtained from THE INDIA RUBBER WORLD office at 10 cents each, postpaid.]

## GREAT BRITAIN AND IRELAND.

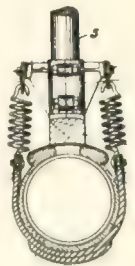
## PATENT SPECIFICATIONS PUBLISHED.

The number given is that assigned to the Patent at the filing of the Application, which in the case of those listed below was in 1904.

\* Denotes Patents for American Inventions.

[ABSTRACTED IN THE OFFICIAL JOURNAL, APRIL 19, 1905.]

- \* 28,159 (1903). Pen holder. J. G. Lorrain, London. (B. B. Goldsmith, New York.)  
 \* 28,167 (1903). Hose coupling. R. C. Scruggs, Birmingham, Alabama.  
 28,233 (1903). Elastic tire. E. Gregg and T. H. Hirst, Birmingham.  
 28,322 (1903). Vehicle wheel [rendered resilient by the application of rubber blocks to the inner ends of the spokes]. G. H. Painter and G. Pittman, Camberwell, London.  
 28,323 (1903). Valve for air cushions. J. E. Morton, Portsmouth,



789,986



790,404.

- \*28,353 (1903). Apparatus for vulcanizing India rubber. A. O. Bourn, Bristol, Rhode Island.
- 28,391 (1903). Tooth brush [through which water is forced by means of a rubber bulb]. A. Schmid, Paris, France.
- \*28,450 (1903). Flexible bath brush [having teeth through which water may be made to flow]. W. Fairweather, London. (Knickerbocker Manufacturing Co., Chicago, Ill.)
- 28,487 (1903). Chrome leather cover for pneumatic tires. T. Houdan, Verviers, Belgium.
- 28,500 (1903). Solid rubber tire [secured to a rim by inwardly curving flanges]. J. E. Hopkinson and J. E. Hopkinson & Co., Para Rubber Mills, West Drayton, Middlesex.
- 28,502 (1903). Suction dust extractor. G. Simpson and W. J. Burton, Richmond, Victoria, Australia.
- 28,628 (1903). Hand stamp. W. H. Winnett, Manchester.
- 28,705 (1903). Revolvable pad [for boot heels and crutch tips]. A. C. Williams, Tottenham.
- 28,729 (1903). Pneumatic tire [with anti-slipping metallic strips]. H. David, Paris, France.
- \*28,745 (1903). Solid rubber tire [with means for securing same]. J. A. Swinehart, Akron, Ohio.

[ABSTRACTED IN THE OFFICIAL JOURNAL, APRIL 27, 1904.]

- 20 (1904). Rubber faced lift valve. A. Ottewell, H. Land, and J. Smith & Co. (Derby), Derby.
- \*83 (1904). Detachable flange for wheels having pneumatic tires. J. B. McMullen, Ellicott City, Maryland.
- 90 (1904). Repair strip for pneumatic tire. A. J. Boulton, London. (Communicated from Paris, France.)
- 207 (1904). Boot heel and sole. C. Norwood, London.
- 269 (1904). Heel protector. E. G. Byard and W. Wyatt, London.
- 289 (1904). Hose coupling. J. Marks, Davenport, New Zealand.
- \*298 (1904). Device for the inflation of vehicle tires while the wheels are in motion. C. Mercader, Pittsburgh, Pennsylvania.
- 301 (1904). Heel lift. H. A. Silver, London.
- 348 (1904). Heel protector. O. Isherwood, Patricroft, Lancashire.
- \*356 (1904). Resilient tire. R. A. Kent, Chicago, Illinois.
- 374 (1904). Tennis ball. C. H. Gray, Silvertown, Essex.

[ABSTRACTED IN THE OFFICIAL JOURNAL, MAY 3, 1905.]

- 525 (1904). Fabric for tire tread. C. Joly and R. Boucher, London.
- 557 (1904). Valve for foot balls and the like [formed of a collapsible rubber tube connected to the bladder by vulcanization and strengthened by rubber or canvas strips; the valve is kept closed by the pressure of the air inside of the ball]. Dunlop Rubber Co. and J. V. Worthington, London.
- 596 (1904). Metallic rim jacket for pneumatic tires. E. Niederhäuser, Cologne, Germany.
- 601 (1904). Pneumatic tire with segmental tread. W. H. Sewell, Belfast.
- \*728 (1904). Device for carpet cleaning by means of an air blast. A. Lotz, San Francisco, California.
- 800 (1904). Pneumatic tire with tread of special fabric. L. Johnstone, Prestwick, Lancashire.
- \*832 (1904). Time hand stamp. W. F. Bartholomew, New York.
- 936 (1904). Pneumatic tire [with air tubes in which the rubber is in compression in order to minimize the escape of air if the tube be punctured]. J. Birtwistle, Pendleton.

[ABSTRACTED IN THE OFFICIAL JOURNAL, MAY 3, 1905.]

- \*965 (1904). Tire. [Solid rubber; with means for securing.] R. M. Connable, Baltimore, Maryland.
- 1239 (1904). Tire rim with detachable side. P. Uhlig, Dresden, and C. Schubert, Hamburg, Germany.
- 1260 (1904). Tire. [Formed of a woven or braided wire, over which is a canvas coating and an outer cover of rubber.] S. Miller, London.
- 1272 (1904). Waterproof bag [for raising sunken objects]. A. J. Boulton, London. (L. Cecchi, Genoa, Italy.)
- \*1290 (1904). Horseshoe pad. C. W. Zaring, New York.
- \*1291 (1904). Composite frictional tread of wire cloth and rubber. C. W. Zaring, New York.

[NOTE.—The two patents last mentioned relate to inventions illustrated and described in THE INDIA RUBBER WORLD, December 1, 1904—page 85.]

- \*1384 (1904). Tire. [Solid rubber; secured by one or more wires

extending longitudinally through the rubber, said wires being surrounded by coils of smaller wire.] E. F. McArdle, New York.

- 1454 (1904). Heel protector. T. H. and N. Roberts, Lytham, Lancashire.
- 1463 (1904). Machine for winding cores of golf balls. R. F. and C. A. Hutchison, Prestwick, Ayrshire.
- 1522 (1904). Method of waterproofing leather boots. F. J. Crockett, Northampton.
- 1577 (1904). Pneumatic tire for disc wheels. T. Silverwood, Brighton.

[ABSTRACTED IN THE OFFICIAL JOURNAL, MAY 17, 1905.]

- 1667 (1904). Pneumatic tire [with puncture preventing bands]. R. Bellingham and J. Bloomfield, Beccles, Suffolk.
- 1712 (1904). Golf ball. R. Appleyard, Silvertown, Essex.
- \*1781 (1904). Hypodermic syringe. F. Wackenhuth, New York.
- \*1870 (1904). Vaginal syringe. F. J. Gruss, San Francisco, California.
- 1889 (1904). Tire. [Solid rubber.] J. P. Higgins, Harringay, Middlesex.
- 1919 (1904). Pneumatic tire. [Tread studded with rivets to prevent slipping.] T. J. R. Clarkson, Aston Manor, Warwickshire.
- 1946 (1904). Pneumatic tire [with special means of attachment to the rim]. C. H. Gray, Silvertown, and T. Sloper, Devizes.
- 1996 (1904). Valve for pneumatic tires. E. Hör and H. Wieser, Nuremberg, Germany.
- 2135 (1904). Sole protector for athletic shoes. A. Sandeman, London.

## PATENTS APPLIED FOR—1905.

Space is given here only to Applications for Patents on Inventions from the United States.

7129. W. A. Lawrence, London. Process of cleaning rubber. April 4.
9054. C. Motz, London. Elastic tire. April 29.
9678. P. M. Justice, London. (Grieb Rubber Co., Trenton, N. J.). Rubber sole for boots. May 8.
9886. I. Tennant, London. Pneumatic tire. May 10.

## THE GERMAN EMPIRE.

## PATENTS GRANTED.

- 161,111 (Class 63d). Tire rim with detachable flange. Vereinigte Gummiwaaren-Fabriken, Harburg-Wien. May 3.
- 161,288 (Cl. 63e). Attachment for motor tires. Mitteldeutsche Gummiwaaren-Fabrik, Frankfurt a/M. May 10.
- 161,289 (Cl. 63e). Pneumatic tire with segmental tread. E. Niederhäuser, Cologne. May 10.
- 161,435 (Cl. 63e). Pneumatic tire with segmental tread. C. A. Breckelsberg, Düsseldorf. May 17.

## DESIGN PATENTS GRANTED [GEBRAUCHSMUSTER.]

- 248,395 (Class 30k). Syringe. Thüringer Gas-Instrumenten Fabrik Luisenthal (Thuringen). April 27.
- 248,396 (Cl. 30k). Syringe. Same. April 27.
- 248,027 (Cl. 37d). Weather strip. A. Schwarze, Brackwede. April 27.
- 248,300 (Cl. 47f). Tightening device for rubber cover. S. Herz, Berlin. April 27.
- 247,943 (Cl. 63e). Cycle tire tread. H. Winkle, Oberhauser. April 27.
- 248,012 (Cl. 64b). Hard and soft rubber bottle cleaning device. O. Berthold, Berlin. April 27.
- 248,037 (Cl. 71a). Boot with elastic goring. F. Kriz, Leipzig. April 27.
- 248,385 (Cl. 77c). Cone with rubber ball. H. Kolmorgen, Kiel. April 27.
- 248,982 (Cl. 174). Holder for rubber type. O. Engau, Laubegast. May 3.
- 248,527 (Cl. 30k). Vaginal syringe. H. A. Raysan, Cassell. May 3.
- 249,091 (Cl. 47d). Rubber scrap. Rubber strap. Allgemeine Elektrizitäts-Gesellschaft. Berlin. May 3.
- 249,072 (Cl. 47g). Automatic closing faucet with rubber attachment. Burmeister & Wenden, Hamburg. May 3.
- 248,936 (Cl. 57a). Rubber band for picture postal cards. M. Junger, Bernau. May 3.
- 248,594 (Cl. 63e). Tire inner tube. R. Fleischer, Minden. May 3.
- 249,083 (Cl. 63e). Tire. C. Matthern, Altona. May 3.
- 248,692 (Cl. 64a). Bottle stopper. A. Albrecht, Waldshut. May 3.
- 248,532 (Cl. 64c). Rubber ring for cask bung. R. Baeger, Ehrenberg. May 3.



- 248,697 (Cl. 64c). Spigot with rubber valve. A. Babl, Frankfurt a/M. May 3.  
 248,884 (Cl. 77a). Exerciser. Vereinigte Gummiwaaren-Fabriken, Harburg-Wien. May 3.  
 248,768 (Cl. 77a). Gymnastic apparatus. Wilhelm Anhalt, Limited. Ostseebad, Kolberg. May 3.  
 249,493 (Cl. 3b). Suspender. E. Heinrich, Cologne. May 3.  
 249,198 (Cl. 19a). Insulating plate. F. Horn, Berlin. May 10.  
 248,355 (Cl. 30g). Nursing bottle. Prager Gummi-Fabrik, Vysocan, Bohemia. May 10.  
 248,459 (Cl. 30g). Teething ring. *Same*. May 10.  
 248,555 (Cl. 30g). Baby pacifier. *Same*. May 10.  
 249,242 (Cl. 63e). Anti slipping device for solid rubber tires. H. Feller, Gotha. May 10.  
 249,518 (Cl. 63e). Solid rubber tire. *Same*. May 10.  
 249,514 (Cl. 64a). Non leaking vessel closure. Gummi-Werke "Elbe" A.-G., Piesteritz. May 10.  
 249,476 (Cl. 71a). Stiffening for rubber shoes. A. Schwarz, Breslau. May 10.  
 249,768 (Cl. 3b). Necktie holder. E. Pietsch, Dresden. May 17.  
 249,891 (Cl. 3b). Rubber-taffeta bag. Frau Emsy Ackerby-Klau, Berlin. May 17.  
 249,366 (Cl. 63e). Anti-slipping cover for pneumatic tires. A. Heimstaedt, Rudolstadt. May 17.  
 249,831 (Cl. 63e). Pneumatic tire cover. A. von Lude, Frankfurt o/M. May 17.  
 249,940 (Cl. 63e). Solid rubber tire. H. Feller, Gotha. May 17.  
 250,129 (Cl. 64a). Rubber ring for meat jars. J. J. Schlichting, Marne. May 17.  
 249,985 (Cl. 77f). Joint for rubber figures. Ungarische Gummiwaaren-Fabrik, Budapest. May 17.  
 250,017 (Cl. 77f). Toy air pump. O. Michelis, Rixdorf. May 17.

## PATENTS APPLIED FOR.

- 18,898 (Class 63e). Solid rubber tire. James A. Swinehart, Akron, United States. April 19.  
 9,558 (Cl. 63e). Elastic tire. Charles Henry John Chetwynd Talbot, Earl of Shrewsbury and Talbot, London, England. April 19.  
 19,240 (Cl. 39a). Inflator for rubber casings. L. Fortura, Ginnheim. April 27.  
 26,454 (Cl. 63e). Tool for mounting tire treads. Michelin & Cie., Clermont-Ferrand, France. April 27.  
 26,567 (Cl. 63e). Tire. C. Michler, Cologne. April 27.  
 21,182 (Cl. 70c). Inkstand with elastic well. Y. H. K. Weilin, Helsingfors, Finland. May 3.

## THE FRENCH REPUBLIC.

## PATENTS ISSUED (WITH DATES OF APPLICATION).

- 348,846 (Oct. 28, 1904). Société Renard. Wooden and rubber heels for shoes.  
 349,039 (Dec. 8). Fornier de Savignac. Segmental elastic tire.  
 349,061 (March 8). E. L. C. Roussier. Anti skidding tire protector.  
 349,063 (Dec. 17). H. A. Salmer. Pneumatic tire.  
 349,115 (Dec. 1). Van der Stickelen. Wheel tire.  
 349,153 (Dec. 19). G. Duvivier. Elastic tire.  
 349,164 (March 11). E. Aurange. Method of attaching India-rubber to the feet of animals to prevent slipping.  
 349,185 (Dec. 14). W. K. d'Arcy. Tire.  
 349,210 (Dec. 19). P. D. Hall. Wheel tire.  
 349,220 (Dec. 20). E. Lacouture. Pneumatic tire with wide tread.  
 349,199 (Dec. 17). C. E. Julien. Anti skidding and unburstible pneumatic tire with detachable tread.  
 349,112 (Nov. 25). L. E. Petersen. Process for reclaiming rubber.  
 349,162 (Dec. 19). M. Marx. Process for the extraction of Caoutchouc from plants.  
 349,295 (Dec. 10). F. Woodgates. Material for repairing pneumatic tires.  
 349,331 (Dec. 22). P. Prache. Truncated elastic washer and its application for deadening vibration, in vehicle wheels.  
 349,338 (Dec. 22). A. Catala. Pneumatic tire.  
 349,363 (Dec. 15). de Fleury. Hydro-pneumatic tire.

[NOTE.—Printed copies of specifications of French patents may be obtained from R. Bobet, Ingenieur-Counseil, 16 avenue de Villiers, Paris, at 50 cents each, postpaid.]

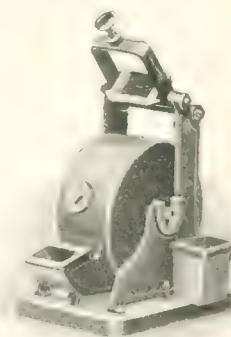
## RUBBER CEMENT CANS.

A DEVICE which apparently should possess an interest for many branches of the rubber industry is the patented cement pail used in leather shoe factories for applying rubber cements, great quantities of which are used for shoe channelling, and to the manufacture of which several large plants are devoted. The practice of carrying cements in ordinary tin receptacles is not only wasteful, but is more or less dangerous, because of their evaporative and inflammable nature. A fire-



KRIEG CEMENT CAN.

proof and non-evaporating cement can made by the J. K. Krieg Co. (New York) is referred to as affording a safe and most economical method of keeping cement. This can is made of cast iron and has a mouth fitted with a cover of iron, into which the cement flows almost steadily, thereby preventing the accumulation of dirt and sediment, and obviating the tendency to harden. This can is fitted with a receptacle for water in which the brush may be kept soft when not in use. It is made in 1 gallon and 3 quart sizes. Another cement can of a new and desirable type, and already in wide request, is that manufactured by the Ross-Moyer Co. (Cincinnati). It is so designed that the orifice from which the cement is taken by the brush, while sufficiently large for the purpose, offers only a very small surface for evaporation, and when not in use the opening is closed by means of a clamp, which renders evaporation or ignition impossible. This can is made in three sizes, holding 1½ pints, 2 quarts, and 1 gallon.



ROSS-MOYER CEMENT CAN.

CHICLE.—While Mexico continues to be the principal source of supplies of this gum, there is a considerable export from British Honduras. The latest official report for that colony gives the amounts shipped [in pounds avoirdupois] for the past nine years as follows:

1895.....	105,478	1898.....	255,263	1901.....	136,391
1896.....	925,199	1899.....	260,448	1902.....	252,933
1897.....	255,945	1900.....	260,848	1903.....	409,508

From the amounts credited to British Honduras in the returns published at Washington it appears that the principal consumption of this product, as with that from Mexico, is in the United States. Part of the British Honduras Chicle is exported direct to Canada, and thence to the United States.

## NEWS OF THE AMERICAN RUBBER TRADE.

## THE NEW RUBBER FACTORY AT DAYTON, OHIO.

THE Dayton Rubber Manufacturing Co., mentioned in the last issue of this Journal as having been incorporated to acquire the factory of the Dayton Rubber Co., which went into liquidation without having begun to make goods, have been organized by the election of the following officers:

*President*—E. P. HOOVEN, Xenia, Ohio.

*Vice President*—J. C. HOOVEN, Hamilton, Ohio.

*Secretary and Treasurer*—CLAUDE C. HOOVEN, Dayton, Ohio.

*Additional Director*—C. E. HEISER and C. O. RICHTER.

J. C. Hoooven is president and C. O. Richter secretary of The Hoooven, Owens, Rentschler Co., of Hamilton. Mr. Heiser, another director, is president of the Second National Bank of Hamilton. The new company are capitalized at \$150,000, of which \$100,000 is understood to be paid in. The company expect to begin operations by July 1, making a general line of mechanical rubber goods. Some additions will be made to the plant just acquired, besides which a reclaiming plant will be established.

## A NEW RUBBER RECLAIMING COMPANY.

APPLICATION for a charter under the laws of Pennsylvania has been made by The S. & L. Rubber Co., who have acquired premises at Chester, Pennsylvania, for the purpose of reclaiming rubber from old boots and shoes, and expect to be able to begin supplying their product by the end of the present month. The only subscribers to the capital stock of the company are James M. Stotesbury and Joel H. Leeds. Mr. Stotesbury has been identified with rubber reclaiming for a number of years. In 1881 the acid process of reclaiming was taken up by his firm of J. M. Stotesbury & Co., which subsequently became the Philadelphia Rubber Works. Mr. Leeds was until recently superintendent of the Philadelphia Rubber Works, which position he filled for 18 years. Mr. Leeds is an expert manufacturer, and Mr. Stotesbury widely known in the trade in connection with the marketing of reclaimed rubber.

## THE CINCINNATI RUBBER MANUFACTURING CO.

THE officials of this new company, formed to acquire the rubber department of the Whitman & Barnes Manufacturing Co. (Akron, Ohio), hope to be able to occupy early in August the model plant now being erected in Norwood, a manufacturing suburb of Cincinnati, on the line of the Baltimore and Ohio Southwestern railroad. The factory, which is of modern mill construction, will consist of 8 separate buildings, arranged in the form of the letter L and contain a floor area of 90,000 square feet. Plans have been prepared with a view to the addition later of another wing. The power equipment embraces a battery of boilers of 800 HP. The mill room is to be driven by a direct type Corliss engine of 400 HP. One 150 kilowatt electric generator is to be driven by a 200 HP. Corliss engine. A portion of the plant will be run by small individual motors. As soon as the buildings are ready for occupancy the manufacturing plant now in operation at Akron will be moved to Norwood. The general management, as already reported, will devolve upon Mr. W. G. Brown, who has been connected for some years past with Messrs. Whitman & Barnes. The president of the company and one of the largest shareholders is Dr. J. M. Crawford, who represented the United States as consul general at St. Petersburg for 10 years, ending in 1896, and wrote a book on Russia, having made a close study of the people and the

economic and political conditions there. Later he went into business in Cincinnati, and is now president of the Smith & Nixon Piano Manufacturing Co., three banks, and a coal mining company, in addition to being a director in several other financial and industrial enterprises and vice president of the Cincinnati Business Men's Club.

## A REMOVAL IN THE CHICAGO TRADE.

THE Boston Woven Hose and Rubber Co. report that the increase in their business in the territory of which Chicago is the center has rendered it necessary to have more space. They have, therefore, moved their Chicago headquarters to Nos. 145-149 West Lake street, where they occupy the entire building of three floors and a basement, comprising about 20,000 square feet of floor area. The building is entirely new, having been finished with special reference to its present use, and is held under a long lease. The location with reference to incoming and outgoing carload shipments is particularly desirable, and the move is one which the company are already very much pleased with. Mr. E. H. Huxley is in charge as manager.

## THE CANADIAN RUBBER CO. OF MONTREAL, LIMITED.

WHEN the work already commenced on the new factories of this company at Papineau avenue and Notre Dame street has been completed, this latest addition to the already notable plant of the company will form a distinct ornament to Papineau avenue, as several buildings now on the premises will be torn down to make room for new buildings of more modern design and improved appearance. New roofs will be placed over the existing factory buildings, and other marked improvements made. All the contemplated improvements, it is anticipated, will be completed by the end of 1906.

## CATASAUQUA RUBBER CO. OF PENNSYLVANIA.

THE INDIA RUBBER WORLD is advised that the company above named, operating at Catasauqua, Pa., are in no way affected by the appointment of a receiver by the United States courts for the Catasauqua Rubber Co., incorporated July 21, 1904, under the laws of the District of Columbia, said receiver being appointed on the application of William MacDonald, a shareholder in the last named corporation. The business was reorganized some months ago and a Pennsylvania charter obtained, under date of February 16, 1905, the assets of the old company being acquired by the new.

## UNITED SHOE MACHINERY CORPORATION.

ARTICLES of incorporation of the above named company were filed in the office of the secretary of state of New Jersey on May 2, by John Reynolds, William Berdan, and Frank Bledhill, all giving Paterson, N. J., as their address. The authorized capital stock is \$50,000,000—in \$25 shares, of which \$15,000,000 shall be preferred and \$35,000,000 common stock. The declared purpose is to make and deal in all forms and classes of machinery and implements used in the manufacture of boots, shoes, and other footwear, either in leather or rubber goods. A circular issued by the new corporation offers to purchase all outstanding shares of the United Shoe Machinery Co. (Boston), which is also a New Jersey corporation, that shall on or before June 29, 1905, be deposited with certain named trust companies, the authorized capital stock of the new company not required for the purposes of this offer to be reserved for future issue for the acquisition of additional properties and



other purposes recited in the articles of incorporation. The United Shoe Machinery Corporation intend to declare quarterly dividends at the rate of 6 per cent. per annum on the preferred shares and at least 8 per cent. on the common stock, the first of such dividends to be paid in October, 1905.

#### "DIAMOND" TIRES FOR THE GORDON-BENNETT RACES.

ALL the tires to be used on the American cars taking part in the coming Gordon-Bennett cup races, to begin on July 5, have been manufactured by The Diamond Rubber Co. (Akron, Ohio). The Diamond company have despatched to Paris a force of expert tire men, under C. B. Myers, of the office force at Akron, whose duty it will be to take up stations along the route of the races and be in readiness to make prompt repairs or replacements in case any should be necessary.

#### RUBBERNIT WATERPROOFING CO.

THIS is a company formed to utilize a waterproofing compound invented by C. L. Stewart, of Rutland, Vermont. A factory has been erected at Rutland, and the output includes horse and wagon covers, tents, awnings, dairymen's aprons, and waterproof cloth from sheetings to 10 ounce duck. The waterproofing compound, called "Rubbernit," is claimed by the inventor not to be affected by heat or cold, acids or alkalis. The company is incorporated under Vermont laws with \$5000 capital. H. E. Colburn is president; C. L. Stewart, vice president; O. H. Coolidge, secretary and treasurer.

#### THE SPALDING FACTORY INCORPORATED.

A. G. SPALDING & BROTHERS MANUFACTURING CO. has been incorporated under Massachusetts laws (April 28, 1905), with \$100,000 capital to manufacture and deal in athletic goods, their factory being located at Chicopee, Massachusetts. As one of the largest houses in the world dealing in goods of this class the Messrs. Spalding through their stores throughout the United States have long been distributors of an important amount of rubber goods. It is not understood that they purpose entering the rubber industry though the firm have manufactured golf balls for some time past in the factory at Chicopee, and these they will continue to make.

#### NEW JERSEY CAR SPRING AND RUBBER CO.

THIS company has distributed recently among its many customers for mechanical rubber goods some very handsome souvenir watch fobs. One contains a representation of the trademark used on the company's "Gladiator" belting, surrounded by a wreath. Another of somewhat different form, relates in like manner to their "Red Oak" sheet packing and gaskets.

#### CONSOLIDATED COTTON DUCK CO.

See THE INDIA RUBBER WORLD, June 1, 1905, page 307.

ARTICLES of incorporation of the above named company were filed May 30, 1905, with the secretary of state of Delaware, by Albert Neary, Raphael Brill, and Anton J. Ditman, all of New York city. The capital named is \$13,000,000. The object is the complete amalgamation of the United States Cotton Duck Corporation and the Mount Vernon-Woodberry Cotton Duck Co.

#### DRYING RECLAIMED RUBBER.

THE drying of reclaimed rubber is one of the most important steps in the process of reclaiming. The antiquated system of drying by screens has been replaced by the more modern and economical method of first passing the material through an Automatic Continuous Screw Press, which materially reduces the moisture, and then delivering to an Automatic Continuous Steam Heated Air Dryer, from which the material is delivered thoroughly and evenly dried ready to go to the rolls for sheeting. Many of the largest plants both in the United States and abroad have installed this system. It is not only found more

economical in labor, fuel, and space required to install, but also produces a vastly higher grade of material. [American Process Co., Nos. 62 64 William street, New York.]

#### DEFUNCT RUBBER CORPORATIONS.

A RECENT proclamation by the governor of New Jersey declares the charters of certain named corporations under the laws of that state to be void on account of their failure to pay the corporation taxes assessed against them by the state for the year 1902. Following are the names of such concerns as were related to the rubber trade, together with further details in regard to some of them:

American Belting and Packing Co., incorporated February 11, 1901, capital \$50,000; maintained an office at No. 35 Warren street, New York, for jobbing rubber goods made in Trenton.

American Golf Ball Co.

Anglo-American Wheel Within Wheel Co. [See reference to the Wheel Within Wheel Co., below.]

Baracoa Rubber Co.

Eagle Rubber Manufacturing Co.

Hird Cushion Tire Co., Providence, R. I., incorporated December 15, 1901, capital \$200,000; to exploit a cushion vehicle tire patented by Charles Hird

Munger Vehicle Tire Co., Trenton, incorporated December 15, 1899, capital \$600,000; to manufacture tires invented by L. D. Munger.

New York Rubber Tire Co., incorporated April 18, 1900, capital \$200,000; had an office at No. 18 South street, New York.

Pneumatic Syndicate Co., incorporated June 6, 1901, capital \$120,000; to serve as 'the preliminary organization of the American Pneumatic Horse Collar Co.'

Punctnot Tire Co., incorporated September 20, 1901, to make non-puncturable tires; capital \$1,000,000. Advertised tires for some time from Boston.

Royal Rubber Co., incorporated April 4, 1900, capital \$2,500,000; to deal in rubber and rubber products; incorporated by W. Erdman, H. A. Ockershausen, and L. Frankel, of Jersey City.

Union Tire Co.

United States Tire Inflator Co., incorporated May 19, 1901, capital \$125,000

Wheel Within Wheel Co. had factory at Hawthorne, N. J., and office in the Park Row building, New York, with Colonel George Pope, president. The wheel had a solid rubber tire on the rim and a pneumatic tire within.

#### AKRON (OHIO) NOTES.

CHARLES A. MOTZ has been granted new patents in the United States, Canada, England, and France on his solid "clincher" tires. [See THE INDIA RUBBER WORLD June 1—page 306]. This time he has patented another fastening appliance or principle in which transverse wires with a circumferential end are used in clinching the tire to the rim. In his patent granted previously, the wires were placed diagonally across the tire. This latter principle Mr. Motz will utilize in manufacturing tires for heavy machines, while for lighter machines the last patent will be used. The molds and machinery for the Motz tire are about completed, and the Buckeye Rubber Co. expect to commence putting out the tire very shortly.

—The Diamond Rubber Co. are having erected a two story brick building, 35x50 feet, to be used as a laboratory. The company have recently made other extensive improvements, including new office quarters. In connection with the latter a restaurant has been installed for the use of the office staff.

—William F. Neubauer, formerly in the drug business in this city, and E. C. Neubauer, who has been with the Goodyear Tire and Rubber Co. for four years, have gone to Jeannette, Pennsylvania, to take positions with the Pennsylvania Rubber Co.

—The Alkali Rubber Co. are adding a two story brick wing on the Jackson street side of their plant to be utilized for offices.

—Warren B. Rood has resigned the position of sundries manager of the Goodyear Tire and Rubber Co. to become connected with the National India Rubber Co. and has removed, with his family, to Bristol, Rhode Island.

## THE RUBBER MERGER OPERATIVE.

PURSUANT to the action of the United States Rubber Co. relative to acquiring a controlling interest in the Rubber Goods Manufacturing Co. [See THE INDIA RUBBER WORLD, June 1—page 311], advertisements appeared in the New York newspapers, signed Anthony N. Brady, "syndicate manager," inviting the deposit, with the Central Trust Co. of New York, on or before June 15, 1905, of shares of the Rubber Goods company, with the understanding that shares of the new issues of the United States Rubber Co. should be exchanged for the same, on the basis of the proposals already referred to. Said offer was conditional upon the deposit of at least two thirds in amount of all outstanding stock of the Rubber Goods Manufacturing Co. "After June 15," the advertisements read, "no deposits will be received except in the discretion of the undersigned [Anthony N. Brady], and on such terms as the undersigned may prescribe." On June 16 it was announced: "One hundred and seventy-six thousand two hundred and forty-seven shares of stock of the Rubber Goods Manufacturing Co. (being more than 67 per cent. of the outstanding share capital) having assented within the time allowed to the plan for exchanging the stock for that of the United States Rubber Co., the same has been declared operative." [The exact number of shares of the Rubber Goods company being 259,931, the number of shares deposited amounts to 67.8 per cent.]—Gossip has been current in Boston that certain mechanical rubber goods factories in New England would likely be acquired by the United States Rubber Co., for one reason, because of the interest in them held by the estate of the late Hon. E. S. Converse, which estate is also largely interested in the United States company. It is authoritatively stated, however, that the Converse estate has liquidated for the most part its former important holdings in the mechanical companies to which the rumors related.—Boston *News Bureau* reports: "President George A. Lewis of the Beacon Falls Rubber Shoe Co. says of the rumor that the United States Rubber Co. now dictates the policy of that company and guarantees 8 per cent. dividends upon that company's stock: 'I wish to deny this report as emphatically as possible. The United States company has not secured control of our company nor does it dictate its policy.'"

## NEW ENGLAND RUBBER CLUB.

THE annual summer outing of the New England Rubber Club will be held on July 19, afternoon and evening, at the Country Club, Brookline. The executive committee of the New England Rubber Club carefully examined various shore resorts and out of town places with a view to holding the outing in some one of them but the Country Club, because of its accessibility and its varied attractions, was so much better than anything else that could be secured, that they were unanimous in deciding in favor of it, and were successful in securing it through the influence of Mr. Arthur W. Stedman, vice president of the Club.

## THE REPUBLIC RUBBER CO. (YOUNGSTOWN, OHIO.)

THIS company is enlarging its plant to the extent of a new three story building, to be about 75×200 feet. This addition will be of brick and steel, with slate roof, and will be used as a hose department. The enlargement is made in order to enable the company to take care of its increasing business, the existing facilities no longer proving sufficient.

## HARTFORD RUBBER WORKS CO.

WORK has been begun upon a two story brick addition, 150×40 feet, to the factory buildings of this company at Hartford, which has been rendered necessary by the marked increase in the business of the company during the past six months

This need for additional facilities has developed in spite of the fact that the company of late have been operating the plant at New Brunswick—formerly operated by the India Rubber Co.,—to take care of the increase of business in their mechanical rubber line.

## POPE MANUFACTURING CO.

THE factory at Hartford, Connecticut, built by Colonel Albert A. Pope and utilized by him in making the "Columbia" bicycle famous, will be devoted hereafter to the automobile manufacture, and the "Columbia" wheels will be produced at Westfield, Massachusetts, in another of the Pope company's factories. The company's bicycle selling departments are to be further consolidated, all the agents reporting to the Hartford office, and the jobbing trade to be supplied from Chicago.

## A NEW CABLE IN THE GULF OF MEXICO.

THE cable steamer *Faraday*, owned by Siemens Brothers & Co. (London), arrived on June 15 at Galveston, Texas, having on board 800 knots of submarine cable, to be laid for the Mexican Telegraph Co. between Galveston and the Mexican port of Coatzacoalcos. The laying of the new cable, which has now been completed, gives the company three lines between the two ports named—the new cable, which is direct, and two lines which touch Vera Cruz *en route*.

## HOSE FOR USE ON THE PANAMA CANAL.

THE Boston Woven Hose and Rubber Co. recently were awarded an order for over 32,000 feet of steam, air, and water hose, intended for service on the Panama canal. The greater part of the order was steam hose, this being probably the largest order ever placed for such hose. As evidence of the extensive equipment and splendid organization of the company, it is noted that arrangements were made to produce the entire order, including couplings and fittings, in six working days.

## "REPUBLIC" SIDE WIRE TIRES IN CANADA.

THE Canadian Rubber Co. of Montreal, Limited, has purchased exclusive rights for the manufacture and sale in the Dominion of the "Republic" side wire rubber carriage tire, made and controlled in the United States by The Republic Rubber Co. (Youngstown, Ohio). Canadian carriage manufacturers and others, who have been buying the "Republic" tires liberally from the United States, doubtless will welcome the news that they are now to be made in Canada.

## NEW INCORPORATIONS.

THE Vant Woud Rubber Co. (New York), June 6, 1905, under New York laws, to manufacture rubber druggists' sundries; capital \$20,000. Incorporators: Victoria A. Vant Woud and Henry C. Brewer, Brooklyn, N. Y., and Robert A. Kincaid, Denver, Colorado. The corporation will continue the business conducted under the same name by Victor C. Vant Woud, who died on March 25.

= Inter State Rubber Shoe Co. (Trenton, N. J.), June 7, 1905, under New Jersey laws, to manufacture rubber footwear; capital authorized, \$20,000. Incorporators: Benjamin W. Elbertson, F. Walton Messler, J. Forman Rose, and Burnham L. Elbertson, all of Trenton.

= Commonwealth Rubber Co., June 8, 1905, under Maine laws, to make and deal in rubber goods; capital authorized, \$500,000. George H. Allen, president, and Edward T. Fenley, treasurer, both of Portland, Maine.

= Goodyear Rubber Goods Co. (Detroit), June 14, 1905, under Michigan laws, to deal in rubber goods; capital, \$25,000. Incorporators: S. Frederick Denny, George A. Coffey (Grand Rapids), M. B. Twomey, L. F. Wineman, Frederick Seagrave. Messrs. Denny and Coffey have conducted a retail business hitherto under the style Goodyear Rubber Store.



## NEW YORK STOCK EXCHANGE TRANSACTIONS.

## UNITED STATES RUBBER CO.:

DATES.	COMMON.			PREFERRED.		
	Sales.	High.	Low.	Sales.	High.	Low.
Week ending May 26	6,400	12 1/4	37 1/4	1,898	110	10 1/4
Week ending May 27	6,400	39 1/2	38 1/2	3,050	106	104
Week ending June 3	1,150	31	37 1/2	1,200	105	104 1/2
Week ending June 10	600	38 1/4	37	100	104	104
Week ending June 17	800	38 1/2	37	1,400	104	102 1/2
Week ending June 24	230	38	37 1/2	2,700	104	104 1/2

The first trading in the new second preferred shares of the United States Rubber Co. "when issued" was reported on the curb market on June 26, beginning at 69 and rising to 70, in transactions involving 700 shares.

## RUBBER GOODS MANUFACTURING CO.:

DATES	COMMON.			PREFERRED.		
	Sales.	High.	Low.	Sales.	High.	Low.
Week ending May 20	25,250	38	34 1/2	2,050	109	104 1/2
Week ending May 27	10,750	38 1/4	33 1/2	80	103	102
Week ending June 3	3,517	38 1/4	33 1/2	1,550	105	102
Week ending June 10	3,500	33 1/4	38 3/8	800	104	100
Week ending June 17	6,070	33 3/4	31 1/4	1,980	102	101
Week ending June 24	800	33 1/4	32	750	101	101

## SUMMER SPORTS OF RUBBER MEN.

THE great annual United States Rubber Co. ball game took place at New Dorp, Staten Island, on June 17. This year the opposing teams represented the "Treasurer's Department"—the challenging nine—and "All Other Departments" (including the General Rubber Co.). The game was witnessed by a large number of other employes of the office, and their friends. The players and the runs made were:

TREASURERS.		ALL OTHERS.	
Cantwell, r.f.	1	Francis, r.f.	5
Daniels, s.s.	1	Phipp, s.s.	5
Clark, 3b.	2	Goodyear, 3b.	6
Smith, 2b.	2	Brown, 2b.	3
Hubbard, 1b.	2	Colt, 1b.	4
Fox, l.f.	2	O'Neill, l.f.	6
Driscoll, c.	1	Bergman, c.	4
Strong, p.	2	Guid, p.	5
Thompson, c.f.	1	Botzfelder, c.f.	4
Total	14	Total	42

=A game of base ball between the employes of the New York Commercial Co. and Poel & Arnold, resulting in a score of 26 to 19 in favor of the former, was played on June 17, on the Colonial Athletic Grounds, Flatbush, New York. The teams were made up as follows:

NEW YORK COMMERCIAL CO.		POEL & ARNOLD.	
Barwick, c.		Kelley, c.	
McMaster, p.		Goller, p.	
Sears, 1 b.		Thomas, 1 b.	
Gove, 2 b.		Clark, 2 b.	
Case, s. s.		Leslie, s. s.	
McClintock, 3 b.		Greenwood, 3 b.	
Duffy and Utter, r. f.		Jackson, r. f.	
Manchester, c. f.		Oakley, c. f.	
Frey, l. f.		Britton, l. f.	

Kelley's playing suggested that he was a lineal descendant of "Slide," famous in song and story. The principal "rooting" for the Commercial team was done by Messrs. Betts and Jeffords, who evidently have reduced that feature of the game to a science. The game was witnessed by a bevy of pretty stenographers from the Commercial company's office, who proved enthusiastic "fans."

=The annual picnic of the employes of the Voorhees Rubber Manufacturing Co. will be held on July 1 at Greenville Schuetzen Park, near Hoboken, New Jersey. Handsome prizes

have been purchased for the winners in various sporting contests, and the officials of the company are expected to attend, as they have done in the past.

=A baseball team made up of employes of George Borgfeldt & Co. (New York) has been doing good work this season, having won a number of games. The team embraces:

E. Schaefer..... c. f. J. Mauss..... 1 b. A. Loesch..... 3 b.  
R. Schaefer..... p. E. Twyeffort... r. f. W. Hausteine.... 1 f.  
B. Demmann.... c. H. Kramer.... 2 b. F. Roeder..... s. s.

Equitable Park, at Sixty-seventh street and West End avenue, New York, has been leased by the team for every Saturday afternoon this summer.

=A baseball match at Naugatuck, Connecticut, on June 14, between nines from the office forces of the Wales-Goodyear Shoe Co. and the Beacon Falls Rubber Shoe Co., was won by the first named by a score of 17 to 9.

## THE OHIO RUBBER CO. (CLEVELAND).

THE Ohio Rubber Co. was organized some 20 years ago, and incorporated in 1893 with the late Mr. Louis K. McClymonds as president. "The present staff, Mr. W. E. Byrnes, president, for the 3 1/2 years and manager for 7 years; Mr. W. D. Hunt, secretary; Mr. W. E. Crofut, treasurer; and Mr. J. Scott Kerr, manager of the retail store," says the *Cleveland Town Topics*, "can be complimented on giving Cleveland the finest rubber store between New York and Chicago." The Cleveland house has eight road and three city salesmen. A branch house in Cincinnati employs three road salesmen touring through the southern states, while two men canvass the city. The firm have the Ohio agency and are also agents for the adjacent territory of the Mechanical Rubber Co.

## TEN MILLION DOLLAR GUAYULE COMPANY.

ARTICLES of incorporation of the Compania Guayulera Mexicana, with \$10,000,000 capital authorized, were filed in the office of the secretary of state of New Jersey, on June 22, 1905, by T. W. B. Middleton, R. S. Tully, C. A. Cole, A. S. Garbe, and H. A. Bingham, all of Jersey City. The object is to extract rubber from the Mexican "Guayule" and like shrubs.

## TRADE NEWS NOTES.

THE additional \$1,000,000 of preferred shares of the Rubber Goods Manufacturing Co., issued in connection with acquiring the whole of the capital stock of Morgan & Wright, Inc., has been admitted to the unlisted department of the New York Stock Exchange.

=Notices have been posted at the two factories of the Woonsocket Rubber Co. that they will be shut down at the close of work on Friday, August 14, for the usual summer vacation, which this year will last for two weeks.

=The Chicago Electric Hose Co. (Wilmington, Delaware), incorporated in 1900, to manufacture rubber hose, advise THE INDIA RUBBER WORLD of the change of their name to Electric Hose and Rubber Co.

=The Beacon Falls Rubber Shoe Co. (Beacon Falls, Conn.) have repaired the damages by fire in their office building, reported in THE INDIA RUBBER WORLD of May 1, and it is now occupied again by the office force.

=Electric Vehicle Co. (Hartford, Connecticut) have lately completed two electric buses for "Seeing New York," designed to carry 50 passengers each. They are equipped with 7 inch endless Firestone sidewire tires.

=New York Belting and Packing Co., Limited, issue a neat folder relating to two of their recent products which should appeal to the interest of the mechanical goods trade—"Delta" matting and "Puritan" mats.

=Important contracts for equipment for the new factory of Morgan & Wright (Detroit, Michigan) have been placed with the Dodge Manufacturing Co. (Mishawaka, Indiana). It is stated that 30 railway cars will be required for shipping the first installment of pulleys, shafting, and the like required for the new factory.

=The Massachusetts Chemical Co. have been making important extensions in their plant at Walpole, Massachusetts, including the erection of an extensive separate office building to which their general offices will be transferred from Boston early in July. The Boston selling office will be continued at the present address, No. 200 Summer street. Mr. C. E. Farrington, of this company, has been devoting much study of late to the steam turbine system, which has been adopted at the factory.

=The place of business of the Frazer & Geyer Co., manufacturers of fountain pens, No. 22 Thames street, New York, has been attached by the sheriff, in the suit of Isaac E. Chapman, a former president of the company, on notes aggregating \$20,000, with interest. It is stated that the litigation is due to internal dissensions, that there are no trade debts, and that the company will be reorganized.

=Empire Rubber Manufacturing Co. (Trenton, New Jersey) sued in the Mercer county supreme court to recover \$6800 from Morris Brothers (Yardville, N. J.) for alleged breach of contract, the complaint relating to the delivery of a certain quantity of cotton duck for use in belting. On June 2 the jury in the case returned a verdict awarding \$217.11 to the plaintiff, who, it is understood, will appeal.

=Mr. Edward R. Rice, manager of branch stores of the United States Rubber Co., was master of ceremonies at the Buffalo Art Gallery on the occasion of the recent address by President Eliot, of Harvard University.

=In Chicago, Peabody, Houghteling & Co. have made a loan of \$25,000 for five years at 4½ per cent. interest to the Rubber Paint Co., secured by the plant of the latter, 41 × 165 feet, with seven story building, at Nos. 36-38 Boston avenue, and three story building at Nos. 161 163 Van Buren street.

=The Fulton Rubber Type Co. (Elizabeth, New Jersey) include in their production printing outfits for boys, which are referred to as meeting an especially good demand in Spain. They export to many other countries, but mainly goods for more practical business uses.

=A convention of the St. Francis River Improvement Association, devoted to the improvement of the St. Francis river, in Arkansas, was held in Memphis on June 22, under the auspices of the three leading commercial bodies of that city, the invitations being extended in the name of the city. THE INDIA RUBBER WORLD is indebted for an invitation to Mr. H. N. Towner (of Towner & Co., Inc.), a member of the committee on arrangements.

=“Advertising for Profit” is the title of a readable booklet issued by the Manufacturers' Advertising Bureau (New York), in relation to their system of taking charge of the advertising of manufacturers in special journals, as organized by Mr. Benjamin R. Western and conducted under his charge for more than a quarter century.

=A patent controlled by B. F. Sturtevant Co. (Boston), has just been issued for a special type of exhaust hood for grinding and polishing wheels. Its special feature consists of a receptacle to catch the particles of solid matter passing from the wheel. The suction being controlled so that it is not quite sufficient to draw them away, these particles fall to the bottom and are there collected, while the practically free air passes through a collector where the last vestige of dust is removed. The receptacle can be readily emptied when it becomes filled,

and its use avoids excessive wear on the exhaust fan, piping and collector. The hood is so designed with hinges and clips that the wheel may be readily removed or adjusted to fit the wheel as it wears to a smaller diameter. The outlet is connected to the exhaust fan, and a shield, a swivel plate and an extension slide may be adjusted so as to more fully enclose the wheel and prevent the discharge of particles into the room.

=Peter Matroni, aged 18, employed in the factory of the National India Rubber Co., as a supposed result of brooding over the impending fate of Mrs. Mary Rogers, convicted of murder in Vermont, hanged himself while alone in the room where he worked.

=The American Rubber Reclaiming Co.—W. C. Coleman, manager—has acquired the premises at Rochelle Park, New Jersey, at one time occupied as a reclaiming plant by John B. Romaine, and begun the reclaiming of rubber by the mechanical process. The business of W. C. Coleman Co., dealers in rubber scrap and second hand rubber machinery, has been removed from Setauket, Long Island, to Rochelle Park.

=The aggregate output of the various factories whose product is sold by the United States Rubber Co. is greater at the present time than ever before in their history. Last year most of these factories ran at their maximum capacity, but the present output is considerably in excess of last year, owing to the fact that during the past twelvemonth the facilities of nearly all of these factories have been materially increased.

=M. Norton & Co. (Boston) dealers in waste rubber, suffered \$10,000 damages by fire to their place of business at Medford on June 18. It is understood that the loss was covered by insurance.

=The Tennis shoes introduced by the United States Rubber Co. ten or eleven years ago have increased steadily in popularity with every year, the output in some years being over 100 per cent. of the preceding year. At present the factory is running on a larger ticket than ever before in its history, and the 1905 Tennis output will materially exceed the very large output of last year.

=Tyer Rubber Co. (Andover, Massachusetts), following their custom of many years, closed their factory on June 30, for 10 days.

=William Hodgkinson has resigned from the position of superintendent of the factory of the National India Rubber Co. (Bristol, Rhode Island). He had been with the company for 12 years, and during the period when H. H. Shepard was general manager filled the position of assistant general manager.

=Retailers who handle the “Boston” rubbers (and they number somewhere from 30,000 to 40,000) will be well supplied with attractive advertising matter for the coming season, as the company has planned a generous campaign. The pretty little black and red stickers that the retailers are using now are simply the first installment of the Boston Rubber Shoe Co.'s advertising plan.

=A New York newspaper mentions the activity of a woman canvasser as having resulted recently in the sale of about 6000 rubber collars to members of the police force.

=A cablegram was received at the New York office of the United States Rubber Co. on June 24 from Mr. E. H. Paine, their manager of sales, announcing his safe arrival in Europe after a very pleasant voyage.

=The two rubber factories at Naugatuck, Connecticut, will be closed about the middle of July—the Goodyear Glove company for two weeks and the Wales-Goodyear for a longer period, in order to install a new engine.

=The Wales-Goodyear Shoe Co. have always been famous for the care with which their goods are made. This is true of



the whole line, but it is particularly noticeable in the "Women's Empress," which differs from the gaiters made by other companies in being absolutely seamless. This quality not only greatly enhances its appearance, but, of course, ensures a better fit.

=Boston Belting Co. will pay the regular quarterly dividend (No. 143) of \$2 per share, on July 1, to stockholders of record June 15.

=Daniel O. Arnold, secretary and treasurer of the rubber jobbing house of W. H. Salisbury & Co. (Chicago) died of heart disease in Philadelphia on June 21. He was about 55 years of age and had been identified with the Salisbury house for 35 years. The funeral was at Providence, Rhode Island.

=Considering the activity, in the Pacific coast and the Far Eastern rubber goods trade, of Mr. William J. Gorham, president of the Gorham Rubber Co. (San Francisco), it might be supposed that he had no time for any interests outside of business. But he is chairman of the trustees—corresponding to the office of mayor—of the progressive suburban city of Alameda, California, with a population of 18,000. At the annual banquet of the Oakland Board of Trade on May 23, Mr. Gorham was among the speakers (the list including the governor of the state and one of its United States senators), responding with felicity to the toast "Alameda—the Island of the Blessed."

=Messrs. William M. Ivins, and Samuel P. Colt, presidents respectively of the General Rubber Co. and United States Rubber Co., expect to sail for Europe about July 11, it being understood that their business will relate in part to the organization of a purchasing agency for crude rubber in London.

=Aiton Machine Co. (New York), engineers and manufacturers of India-rubber mill machinery, will remove their offices on July 1 from Cortlandt street to No. 126 Liberty street. The company have issued "Bulletin No. 48," relating to a new three roll calender, which rubber manufacturers are invited to apply for.

#### EXHIBITION OF RAILWAY SUPPLIES.

HOME Rubber Co. (Trenton, New Jersey) was well represented at the extensive exhibition of railway supplies in connection with the annual conventions of the Master Car Builders' Association and the American Railway Master Mechanics' Association, at Manhattan Beach, beginning June 14. The display included air brake hose and steam hose; "N. B. O" packings and "N. B. O." gage glass washers; and a general line of mechanical rubber goods. Messrs. A. R. Foley and J. C. Berrang were in charge. —The exhibition of supplies in general was of the same character as that held at Washington in connection with the International Railway Congress and reported in THE INDIA RUBBER WORLD June 1 [page 314], though fewer rubber manufacturers were directly represented. The exhibition proved of great interest to the general public, as well as to the large attendance of members of the two associations for whose benefit it was held.

#### THE HASKELL GOLF BALL SUIT IN ENGLAND.

JUST before the printing of this issue a cabled synopsis comes to hand of the decision of Mr. Justice Buckley in the action of the Haskell Golf Ball Co. v. Hutchinson, Main & Co., for alleged infringement of patent, in the High Court of Justice, Chancery division, in London. The hearing began on May 29 and continued for ten days, the reported testimony covering a thousand pages. Plaintiff and defendant were represented by eminent counsel, and the case involved many points of interest to the trade. The justice reserved his decision until after the Whitsuntide vacation. From what is known of it at this writing, the decision upsets the Haskell patent on the testimony of Captain Douglas Stewart, a retired captain in the Royal navy,

who claimed prior use of the invention, but all other points are in favor of the plaintiff. The plaintiff on June 28 gave notice of appeal, being advised by counsel that the decision was not warranted in view of the uncorroborated evidence of the witness referred to.

=George M. Conant of Bridgewater, Mass., and Herbert J. Conant of Boston, doing business in Boston as the Conant Rubber Co., with a factory at South Framingham, have filed a petition in bankruptcy. The liabilities are scheduled at \$145,326 and the assets at \$27,500. The largest creditor is Mary F. Conant of Bridgewater, who holds a note for \$37,381.75.

#### PERSONAL MENTION.

THE INDIA RUBBER WORLD'S correspondent at Akron, Ohio, writes that Mr. Thomas A. Edison is expected in that city this summer, on an overland trip from Orange, New Jersey, to visit Mrs. Edison's mother and other relatives, who live in Akron. The trip is to be made in three automobiles, and one purpose of the long ride is to test a new electric battery which Mr. Edison has invented, and which he believes has the durability and power to carry auto machines over long distances.

=A fishing party which left Providence, Rhode Island, on May 29, for a two weeks' absence, included Colonel Samuel P. Colt, president of the United States Rubber Co.; his brother, Judge Le Baron C. Colt, of the United States court; his son, Russell G. Colt; Walter S. Ballou, president of the Banigan Rubber Co.; Judge Aldrich, of New Hampshire; Dr. Charles F. Peckham, and Mr. Edwin A. Barrows. The party stayed at Colonel Colt's private camp, known as Colt's camp and located at Norcross, on the east branch of the Penobscot river and near the Twin lakes. This camp is a long day's ride from any railroad station or any other mark of civilization, and it is one of the finest fishing grounds in Maine.

=The Hon. Edwin H. Conger, the new ambassador of the United States to Mexico, arrived at Mexico City on June 4, and on the afternoon of the same day at his hotel received a deputation from the Society of the American Colony, headed by Mr. William Vernon Backus, whose election to the presidency of that society was reported in THE INDIA RUBBER WORLD last month. Mr. Backus delivered an address of welcome, to which the ambassador cordially responded.

=Mr. Augustus O. Bourn, Jr., son of the well known president of the Bourn Rubber Co. (Providence, Rhode Island), was graduated from the school of commerce, accounts, and finance of New York University, at the commencement on June 8, receiving the degree of Bachelor of Commercial Science, which is given to men who have pursued a three years' course and are supposed to be educated accountants. Mr. Bourn already held the degree of LL. B. from Columbia University, and has been admitted to the bar.

=Mr. Edward S. Robinson, lately appointed by the governor of New Jersey to be a member of the state board of education, is one of the superintendents of the Rubber and Celluloid Harness Trimmings Co., of Newark.

=Miss Margaret Howe Colman, daughter of Mr. and Mrs. Moses J. Colman, of Arlington, Mass., and Mr. Charles Curtis Beebe, connected with the Boston Woven Hose and Rubber Co., were married at the home of the bride on the evening of June 7. The wedding reception was largely attended, being the most notable social event of the season at Arlington.

GIRL WITH RUBBER PALATE.—Dr. H. E. Harlan, a dentist at Toledo, Ohio, is reported to have made a detachable hard rubber palate for a young woman born with a cleft palate. It is said to work satisfactorily.

## NEW GOODS AND SPECIALTIES IN RUBBER.

## BAILEY'S "WON'T SLIP" TIRE BAND.

THE Bailey "Won't Slip" automobile tire cannot properly be referred to as a new article in the trade, except that, in the sense of the constant adaptation to new conditions of the principle involved, whatever merit this form of construction had in the beginning has been enhanced gradually until the tire of to-day marks a wide advance from the first model manufactured under the Bailey patent.

The present illustration refers to a tire band made on the "Won't Slip" principle, and designed to be cemented and vulcanized to the tread of any kind of automobile tire—detachable tires of all the standard models

or to the single tube tire. A means for the prevention of tires from slipping has been a desideratum with the trade from the date of the first introduction of rubber tires, and while many suggestions have been made in the way of improvement upon the smooth surface tire, none has proved more practical than that of a series of circular studs covered by Mr. Bailey's patent. It is not intended here, however, to go into detail regarding all the merits of this feature, but to point to the convenience to the trade of the arrangements made for supplying tire treads to those who may not need to purchase new tires. The Bailey patents have been taken up on royalty by several of the leading manufacturers of tires, who are now in position to supply either "Won't Slip" tires complete or "Won't Slip" treads. [C. J. Bailey & Co., patentees, No. 22 Bolyston street, Boston.]

## WINTER'S PNEUMATIC GUN RECOIL PAD.

THE use of this appliance renders "all guns gentle at the butt end." It is a pure gum inside pad provided with an air chamber, inflated hard or soft at will by means of a soft rubber tube,



affording a perfect cushion and taking up all the recoil of the gun. The laced leather cover protects the pneumatic pad and presents a smooth surface, which does not interfere with bringing the gun into quick position for aim and firing. The cushion fits the gun like a glove and is light in weight and neat in appearance. [The B. F. Goodrich Co., Akron, Ohio.]

## GOODRICH CLINCHER TIRE TOOLS.

TOOLS for applying and detaching "clincher" tires are so indispensable to the motorist that new devices in this line deserve mention in connection with novelties in the rubber branch proper. The series of tools illustrated here not only is new but apparently of unusual merit. They reduce the expenditure of both time and exertion necessary in dealing with



a tire and render such work in every way less disagreeable than without their use. The ease of manipulation and quick effectiveness of these tools are due mainly to the curved ends and lips of the steel prodders which are made to fit the edge of the wheel rim and engage the tire in such a way that only a few moves are required to force the tire on or off. A set of these tools includes four pieces illustrated in the following order, counting from the top: (1) Ratchet wrench, (2) small prod, (3) large prod, and (4) wheelbrace. [The B. F. Goodrich Co., Akron, Ohio.]

## "NOAIR" NON LEAKABLE STOPPERS.

THIS new rubber stopper possesses many advantages, due to the fact that it closes the bottle hermetically. With its use

there can be no waste while the stopper is in position and no annoyance such as from leakage in trunks while traveling, and the like. It is also especially desirable for household use, as in medicine closets. The contents of a bottle with the "Noair" stopper cannot evaporate or deteriorate. It is made of pure rubber, specially treated with a view to not affecting any liquid injuriously. It is made in six sizes, with tapering plug, so that a wide range of bottles

can be fitted, maroon color, and packed in neat boxes, containing a gross each. [New York Belting and Packing Co., Limited.]



## "P. AND W." RUBBER PRESERVATIVE.

AT certain important exhibitions of railway supplies of late no small attention has been attracted to a material designed to prevent the cracking of rubber goods and the deterioration due to climatic changes and the like, especially where vibration is pronounced, as in the case of air brake and pneumatic tool hose. The material referred to is known as the "P. and W." rubber



preservative, which is the result of practical experience, having been in use for more than three years on an important trunk line, since which time it has been adopted on a number of railways. The material is referred to as being easily applied, while the cost is extremely moderate, the expense for a section of air brake hose averaging less than one cent. [G. S. Wood, Room 209, Great Northern building, Chicago.]

PEOPLE who have pieces of fine china and cut glass which they like to display on sideboard and buffet, will be pleased with the new rubber covered stands which come for that purpose. They are shaped like the ordinary wire stands, but are covered with fine rubber tubing, the idea being to protect the edges of the glass or china, which under ordinary circumstances are liable to become chipped when thus displayed.

### HIGH VALUATIONS OF MEXICAN RUBBER.

THE well known rubber brokerage firm of Lewis & Peat (London), whose valuations of Ceylon plantation rubber have been widely credited, have written the following letter, quoting estimates on specially prepared rubber from *Castilloa elastica* trees 6½ years old, under cultivation on "La Esperanza" plantation, in Mexico. The equivalent prices in United States (gold) currency have been added by THE INDIA RUBBER WORLD. Brazilian Pará rubber was quoted about the same time as high as 5s. 8½d. [= \$1.38⅞] for hard fine, and Ceylon plantation "Pará" sold at the London auction on May 26 at 6s. 9¼d. [= \$1.64¼]:

LEWIS & PEAT,

6, Mincing Lane,  
London, E. C., 20th May, 1905.

GEO. CULLEN PEARSON, Esqr.,  
6, Queen Street place, E. C.

SIR: We have the pleasure to own the receipt of your favour of the 26th instant, with samples of India-rubber which we have carefully examined, and beg to report upon same as follows:

	Value about per lb.
1a. Fine clean black biscuit, well prepared, but a little brittle and short.....	4s. 6d. [= \$1.09½]
2a. Ditto, but biscuit a little thinner and cleaner.....	4s. 6d. [= \$1.09½]
3a. Good clean pale biscuit, mottled-colour in places.....	5s. 0d. [= \$1.21⅝] 5s. 6d. [= \$1.33¾]
4b. Fine thin darkish biscuit, strong, clean, and well prepared....	5s. 9d. [= \$1.39⅞] 6s. 0d. [= \$1.46]
5b. Small thick scrappy biscuits and mixed, pale and dark in colour, probably rejections from above.....	4s. 6d. [= \$1.09½]
7. Fine thin pale biscuit, well prepared, clear, clean, strong and elastic.....	6s. 3d. [= \$1.52]

All the foregoing are good saleable quantities, especially Nos. 4b. and 7. There is a good growing demand for plantation grown Rubber, so long as it is sent home *pure* and in good condition. Damp and heat produce stickiness which is fatal to any raw rubber. Yours faithfully,

[Signed] LEWIS & PEAT.

### STATE OF THE WEATHER IN CEARA.

[FROM "FOLHA DO NORTE" (PARA), MAY 15.]

A FORTALEZA newspaper says that after a period of long continued drought, which appalled the inhabitants of Ceará, rain again commenced to fall during a severe storm on April 23, during which some bolts of lightning struck, happily without causing severe accidents.

The rain gage in Formosa street registered during this rainfall, which lasted seven hours, 85 millimeters of rain, or a total of 186 during the entire month of April, in which there was very little, there having been only 11 days on which rain fell, and consequently only slight hope of a continuance of the winter season this year.

During 1904, rain fell on 17 days during the same month, the precipitation being 133 millimeters. May, moreover, set in with discouraging weather, the heat being very severe.

Between January 1 and April 30 last, there were 47 days on which rain fell, the rain gage recording a total rainfall of 824 millimeters [= 32½ inches], against 40 rainy days with a total rainfall of 636 millimeters [= 25 inches] during the same period of 1904.

[NOTE.—The significance of weather conditions in the Brazilian state of Ceará is that a severe drought there drives hosts of the Cearenses from their homes, many going up the Amazon to work in the rubber fields, thus enhancing the rubber output through Pará. The above report would appear to be unfavorable, the conditions being little better than last year, when many thousands were exiled from their homes by the excessive drought.—THE INDIA RUBBER WORLD.]

### SOME WANTS OF THE TRADE.

[334] FROM a factory: "Can you advise us of the fountain pen manufacturers or any other sources of supply where we might procure hard rubber scrap and shavings of good quality?"

[335] From a factory: "We should like to know the names of some firms in Germany who manufacture rubber substitutes."

[336] From a broker: "Will you kindly inform us where we can obtain 'Fox brand' (shrub) rubber?"

[337] From a factory: "Referring to a report on 'The Manufacture of Cut Sheet' in your April issue, you will confer a great favor by sending me the addresses of firms making this article."

[338] From a factory: "I am desirous of knowing what firms manufacture formers for gloves and finger cots, such as are used in vulcanizing in acids."

[339] From Arizona: "Can you tell me where I can obtain some of the plants or seeds of the Guayule, growing on the plateau near Torreon, Mexico?"

### THE EDITOR'S BOOK TABLE.

INTERNATIONAL EXPOSITION, ST. LOUIS, 1904. OFFICIAL CATALOGUE of the Exhibition of the German Empire. Edited by the Imperial Commissioner. Berlin: Georg Stilke. 1904. [Leather. 8vo. Pp. 372.]

THIS comprehensive and informing descriptive list of 3721 exhibits is prefaced by 358 pages of so called "introductory articles," in which a score of experts have summarized the industrial status of the German empire at the beginning of the twentieth century, not forgetting to note the social and educational progress of the empire. We do not know where a more satisfactory résumé of these subjects is to be found, and, wholly apart from the catalogue of industrial exhibits made by Germany at St. Louis, this volume deserves to be studied by whoever desires to be well informed, without a world of study, in regard to the causes of the recent progress of that country and her industrial prospects. This is a companion volume to a similar work published under the auspices of the Imperial government in connection with the International Exposition of 1900 at Paris. It is printed in the same type of special design which was first used in the 1900 report, and the arrangement of matter in the volume is somewhat similar, though the industrial prefatory review is much more comprehensive. It may be mentioned in passing that the chapter on bicycles in the earlier report has been supplanted by one on motor cars, bicycles having very scant mention in the later volume. The report has been received through the courtesy of the Imperial German consulate general at New York.

## AFFAIRS OF THE UBERO COMPANIES.

THE receivers for the *Ubero Plantation Co. of Boston*, Jeremiah Smith, Jr., and Hugh W. Ogden, on June 13 filed with the clerk of the United States circuit court in Boston their first report on the condition of that company. It is alleged that the company has been grossly mismanaged, and that the officials have been lax in attention to its affairs. The net cash receipts from investors, to April 1, 1905, appear to have been \$571,037.02. The books show no other receipts—from plantation earnings, for example. There was paid to the La Puerta companies—in consideration of lands purchased and alleged development work—\$280,426; other work on plantation, \$46,000; commissions on sale of shares, \$98,717; running expenses, \$115,000. All these payments are claimed to have been extravagant, in view of the small amount of work done, the receivers considering that the sale of the plantation would realize practically nothing for the investors. The receivers ask for authority to bring suit against the various parties to whom money has been paid, with a view to recovering something for the shareholders. [The details of the organization of the *Ubero Plantation Co. of Boston* appeared in THE INDIA RUBBER WORLD, May 1, 1905—page 278.]

\* \* \*

A SUIT in equity having been filed in the supreme court at Boston, Massachusetts, by the receivers for the *Ubero Plantation Co. of Boston* against (1) the Old Colony Trust Co. (Boston), as trustee, (2) La Puerta Plantation Co. (an Indiana corporation), and (3) William D. Owen, to determine title to certain lands in Mexico, an answer has been filed by the Old Colony Trust Co. The agreement under which the *Ubero Plantation Co. of Boston* purchased the land from La Puerta Plantation Co. was that the trust company would hold the deeds until the property was paid for, the consideration being \$750,000, but in the event of the payments not being completed within a certain time, the Ubero company should be entitled to only so much land as the money actually paid would purchase on the basis of \$300 an acre. No land has ever been conveyed to the Ubero company, although the date fixed for the final payment under the contract was July 1, 1904, and the suit has been brought to have the title transferred. The trust company make answer that service should be made upon W. D. Owen and La Puerta company and that they are indispensable parties to the suit. It appears that the Massachusetts court has no jurisdiction over La Puerta company, which is an Indiana corporation and never had a place of business in Massachusetts, and the plaintiffs have been equally unable to get service on Owen, who is supposed to be in Europe. The Old Colony Trust Co. contend that it might operate very unjustly against them if they were compelled to transfer land to the Ubero company, since La Puerta company and Owen might later have cause for action against them. It is reported that La Puerta Plantation Co. will set up the claim that they cannot be compelled to give title to the Ubero company for the reason that the latter has not complied with the terms of its contract in relation to making payments.

AN order discharging the Union Trust Co. as receiver for the *Ubero Plantation Co. of Indianapolis* was entered in the superior court at Indianapolis on June 7, on the motion of Judge Ulric Z. Wiley, vice president and acting president of the company, through his attorney. Judge Carter, in granting the motion, said the court was satisfied that the company had no debts and was solvent, having assets in excess of capital stock liability, and in a condition to continue its business.

## RUBBER INTERESTS IN EUROPE.

## GREAT BRITAIN.

MICHELIN Tyre Co., Limited, with £60,000 [= \$291,990] capital, was registered in London May 11, 1905, to adopt an agreement with Michelin et Cie. (Clermont-Ferrand, France) and William Warne & Co., Limited (London), and to carry on the business of manufacturing and selling Michelin tires and other tires and accessory goods. The board embraces Messrs. Andre and Edouard Michelin, and also Mr. James Burbridge, managing director of the Warne rubber works.

=Callender's Cable and Construction Co., Limited, report a profit for the last business year of £57,065 [= \$277,707], enabling dividends to be paid of 5 per cent. on the preference and 12½ per cent. on the ordinary shares. The company have had cable laying contracts in India, the Malay States, Siam, Australia, and South America, in addition to their home trade, and are planning to secure work in Egypt.

=Mr. H. L. Terry, F. I. C., of Manchester, England, whose name in the past has been connected chiefly with rubber interests, has recently been elected an Associate of the Institution of Mining and Metallurgy, in London. It is understood that despite this entry into a new sphere of work, Mr. Terry retains his interest in and connection with the rubber industry.

## GERMANY.

HERR LOUIS HOFF, of the Vereinigte Gummiwaaren-Fabriken, Harburg-Wien, has just terminated a six weeks' vacation at Carlsbad. Herr Franz Stingl, the other director of the rubber works, had previously returned from a five weeks' stay at Neuheim, where, an INDIA RUBBER WORLD correspondent writes, "an American doctor is fixing up hearts in great shape."

## AUSTRIA-HUNGARY.

KABELFABRIK ACTIENGESSELLSCHAFT (Pressberg and Vienna), with a capital of 2,400,000 kronen [= \$487,200] reports an income during the business year 1904 of 1,410,805 kronen. The dividend rate was 7 per cent., the same as in 1903. Orders for cables were executed for the Austrian and Hungarian governments and for various municipalities in those countries, in addition to orders from Germany, Spain, Belgium, and Russia. The company's new factory in Vienna was opened in May, and the offices removed to that place.

## DENMARK.

THE rubber reclaiming firm "Dansk Afvulkaniserings Aktieselskab," F. Mariendalsvej 47, Copenhagen, has executed a lease of its works for 10 years to its former general manager, Mr. Albert Theilgaard. The power of attorney held by him in conjunction with Mr. Knappe has been cancelled. Mr. Theilgaard will personally manage the enterprise under the firm name "Albert Theilgaard, Dansk Afvulkaniserings Aktieselskab." K. Theilgaard and Alfred Knappe have been granted a joint power of attorney.

## FRANCE.

THE technical director of the Etablissement Hutchinson, the great rubber factory in central France, Monsieur Bouguillon, has received from President Loubet the decoration of the Legion of Honor as a recognition of eminent services to the industries of France.

=A correspondent of THE INDIA RUBBER WORLD in Paris reports meeting there Messrs. Charles H. Taylor and Edgar R. du Mont, of the New York agency of the Harburg and Vienna India-Rubber Co., Mr. du Mont being accompanied by his wife. On June 1 Mr. A. M. Stickney, of the Wellman Sole Cutting Machine Co. was registered at the Grand Hotel de la Porte, Montargis, France.



## REVIEW OF THE CRUDE RUBBER MARKET.

THERE has been a sensible decline in the quotations for all Pará sorts during the month, which may be attributed in part to the fact that July 1 is a period of stock taking in very many rubber factories, and that consumers pursue the policy of not having on hand at that date any larger supplies of raw material than they may deem absolutely necessary. Buying, therefore, has been very quiet, but holders are very confident that after the concluding inventories are concluded a good and possibly more than seasonable demand will prevail throughout the summer months. Quotations for August-September delivery are considerably lower than for spot rubber. The figures given in detail of arrivals at Pará for the last four years show that the yield for the crop year just ended are materially larger than for any twelve-month in the past, which is due to increased arrivals from beyond the Brazilian borders—in Bolivia and Peru, including larger figures for Caucho than in any preceding year.

The monthly inscription sales at Antwerp on June 27, contrary to the general expectation of the trade, showed a slight advance over brokers' estimations.

Following is a statement of prices of Pará grades, one year ago, one month ago, and on June 30—the current date:

PARÁ.	July 1, '04.	June 1, '05.	June 30.
Islands, fine, new.....	108@109	132@133	128@129
Islands, fine, old.....	109@110	none here	none here
Upriver, fine, new.....	112@113	133@134	130@131
Upriver, fine, old.....	113@114	none here	132@133
Islands, coarse, new.....	63@64	76@77	72@73
Islands, coarse, old.....	@	none here	none here
Upriver, coarse, new.....	87@88	96@97	95@96
Upriver, coarse, old.....	88@89	none here	none here
Caucho (Peruvian) sheet.....	66@67	74@75	72@73
Caucho (Peruvian) ball.....	76@77	82@83	80@81

Prices for other grades in the New York market show generally lower values, as follows:

AFRICAN.	CENTRALS.
Sierra Leone, 1st quality.....	Esmeralda, sausage.....84 @85
Massai, red.....	Guayaquil, strip.....72 @73
Benguella.....	Nicaragua, scrap.....83 @84
Cameroon ball.....	Panama, slab.....62 @63
Accra flake.....	Mexican, scrap.....83 @84
Lopori ball, prime.....	Mexican, slab.....58 @59
Lopori strip, prime.....	Mangabeira, sheet.....72 @73
Madagascar, pinky.....	EAST INDIAN.
Ikelemba.....	Assam.....97 @98
	Borneo.....42 @43

## Late Pará cables quote:

Per Kilo.	Per Kilo.
Islands, fine.....	5\$850
Islands, coarse.....	2\$650
Exchange, 16 1/2 d.	

## Last Manáos advices:

Upriver, fine.....	6\$650
Upriver, coarse.....	3\$950
Exchange, 16 1/2 d.	

## NEW YORK RUBBER PRICES FOR MAY (NEW RUBBER).

Per Cwt.	Per Cwt.	Per Cwt.
Upriver, fine.....	1.31@1.35	1.11@1.15
Upriver, coarse.....	1.25@1.27	1.08@1.12
Islands, fine.....	1.23@1.32	1.05@1.11
Islands, coarse.....	73@76	65@70
Cametá, coarse.....	75@81	66@70

In regard to the financial situation, Albert B. Beers (broker in India-rubber, No. 68 William street, New York) advises us as follows:

"The report of a month ago still covers the situation regarding commercial paper, which has ruled very steady through

June, with a fairly good demand, principally from out of town banks, for the best rubber names at 4 and 5 per cent., and the smaller concerns 5 and 6 per cent."

## Statistics of Para Rubber (Excluding Caucho).

	Fine and Medium.	Coarse.	Total 1905.	Total 1904.	Total 1903.
Stocks, April 30.....	357	254	611	303	555
Arrivals, May.....	292	171	463	719	1020
Aggregating.....	649	425	1074	1022	1581
Deliveries, May.....	288	208	496	695	1046
Stocks, May 31.....	361	217	578	327	541

	PARÁ.			ENGLAND.		
	1905.	1904.	1903.	1905.	1904.	1903.
Stocks, April 30 .. tons	496	110	150	355	495	1675
Arrivals, May.....	1600	1085	2070	815	470	650
Aggregating.....	2156	1195	2220	1170	965	2325
Deliveries, May ... ..	1791	1000	2105	800	525	925
Stocks, May 31...	365	195	115	370	440	1400

	1905.	1904.	1903.
World's visible supply, May 31.....	2143	1537	2996
Pará receipts, July 1 to May 31.....	26,326	24,890	25,226
Pará receipts of Caucho, same dates.....	5004	4204	3704
Afloat from Pará to United States, May 31... ..	125	95	500
Afloat from Pará to Europe, May 31.....	705	480	440

## Para Rubber Arrivals.

	1901-02.	1902-03.	1903-04.	1904-05.
July.....	1,260	1,290	1,280	1,250
August.....	1,290	1,370	1,230	1,260
September.....	1,940	1,670	2,010	1,780
October.....	2,640	2,280	2,440	2,820
November.....	2,970	2,650	2,980	2,800
December.....	3,530	2,990	3,530	3,390
January.....	3,860	2,490	4,360	4,590
February.....	3,380	4,760	3,680	4,320
March.....	3,660	4,040	3,940	5,000
April.....	2,140	2,480	2,070	2,120
May.....	2,080	2,070	1,560	2,260
June.....	1,250	1,760	1,500	1,330

Total..... tons 30,000 29,850 30,580 32,420

[a = To June 28, 1905.]

## United States Imports.

## ELEVEN MONTHS ENDING MAY 31.

	1903.	1904.	1905.
India-rubber.....	51,657,573	56,518,851	63,537,996
Gutta-percha.....	288,913	382,501	611,177
Gutta-jelutong.....	11,838,052	13,219,883	17,130,205

## Rubber Scrap Prices.

NEW YORK quotations—prices paid by consumers for carload lots, in cents per pound—show a general increase over last month's figures, as follows:

	Last Month.	Current.
Old Rubber Boots and Shoes—Domestic ...	5 7/8 @ 6	6 1/8 @ 6 1/4
Do —Foreign.....	5 1/4 @ 5 3/8	5 1/2 @ 5 3/4
Pneumatic Bicycle Tires.....	4 1/2 @ 4 3/4	5 @ 5 1/4
Solid Rubber Wagon and Carriage Tires....	6	6 1/2 @ 6 3/4
White Trimmed Rubber.....	8 1/2 @ 8 3/4	8 1/2 @ 8 3/4
Heavy Black Rubber.....	4	4 1/2 @ 4 3/8
Air Brake Hose.....	2 1/2 @ 2 3/8	2 3/4 @ 3
Fire and Large Hose.....	2 @ 2 1/4	2 1/4 @ 2 1/8
Garden Hose.....	1 3/8 @ 1 7/8	1 3/4 @ 1 7/8
Matting.....	3 1/4 @ 1	3 1/4 @ 1

**Bordeaux.**

## IMPORTATION OF CAOUTCHOUC.

MONTHS.	1904.	1905.
January.....	131,550	130,255
February.....	109,025	120,540
March.....	94,715	173,355
April.....	121,500	152,650
May.....	91,425	74,700
<b>Total .....</b>	<b>530,875</b>	<b>657,500</b>

## PRICES [FRANCS PER KILO] JUNE 17.

Soudan twists.....	9.50 @ 9.00	Lahou twists.....	9.40 @ 9.80
Soudan niggers, red..	10.70 @ 11.10	Bassam lumps.....	5.00 @ 6.20
Soudan niggers, white	10.50 @ 10.75	Bassam niggers....	8.70 @ 9.00
Conakry niggers.....	11.30 @ 11.50	M'dg'car—Tamatave	9.00 @ 9.50
Cassamance A.....	7.90 @ 8.00	M'dg'car—Majunga..	7.00 @ 8.25
Cassamance A M....	7.00 @ 7.20	Mangoba.....	7.75 @ 9.20
Lahou cakes.....	7.50 @ 7.75	New Caledonia.....	10.00 @ 11.40
Lahou niggers.....	10.00 @ 11.00	Java.....	8.00 @ 10.50

Stocks this date about 27,000 kilograms.

R. HENRY, SUCCESEUR.

**Antwerp.**

TO THE EDITOR OF THE INDIA RUBBER WORLD: At the large sale by inscription which took place on May 31 the following quantities were exposed and sold:

Congo sorts.....	546 tons offered	502 tons sold
Sundries.....	40 tons offered	34 tons sold
<b>Total.....</b>	<b>586 tons offered</b>	<b>536 tons sold</b>

The chief interest was shown for the good conditioned lots, which on the whole found buyers above valuations, whereas badly conditioned and sticky lots could only be sold with a reduction on prices. The result of the sale is very satisfactory, although prices were rather irregular; the average, however, comes out at valuations.

At a small sale by inscription which took place on June 2, 19 tons out of 27 tons offered were sold at unchanged prices.

The next large sale will be held on June 28, when about 250 tons will be offered. Stocks on June 1, about 345 tons.

C. SCHMID &amp; CO., SUCCESEURS.

Antwerp, June 6, 1905.

## ANTWERP RUBBER STATISTICS FOR MAY.

DETAILS.	1905.	1904.	1903.	1902.	1901.
Stocks, April 30.....	635,875	441,621	488,799	500,664	813,818
Arrivals, May.....	287,333	737,520	352,833	537,530	356,915
Congo sorts.....	214,751	685,086	322,750	485,002	311,722
Other sorts.....	72,582	50,440	30,108	47,528	45,193
Aggregating.....	923,208	1,179,147	841,632	1,038,200	1,170,733
Sales in May.....	576,104	436,932	499,040	573,525	345,291
<b>Stocks, May 31...</b>	<b>347,104</b>	<b>742,215</b>	<b>342,592</b>	<b>464,675</b>	<b>825,442</b>
Arrivals since Jan. 1	2,220,288	2,554,426	2,104,704	2,346,859	2,543,593
Congo sorts .....	1,557,649	2,108,102	1,578,264	2,188,025	2,267,238
Other sorts .....	662,639	446,324	526,440	158,834	276,355
<b>Sales since Jan. 1 ..</b>	<b>2,414,545</b>	<b>2,423,111</b>	<b>2,420,217</b>	<b>2,296,893</b>	<b>2,332,190</b>

## RUBBER ARRIVALS AT ANTWERP.

MAY 17.—By the *Philippeville*, from the Congo:

Société A B I R.....	kilos	25,000
Comptoir Commercial Congolais.....		11,000
Bunge & Co.....	(Société Générale Africaine)	102,000
Do.....	(Comité Spécial Katanga)	15,000
Do.....	(Société "La Kotto")	1,000
Do.....	Société des Sultans du Haut Ubangi	10,500
Société Equatoriale Congolaise..	(Société l'Ikelemba)	2,000
Edm. Van Steensel (Cie. Bruxelloise du Haut Congo)		4,500
Cie. Commerciale des Colonies (Cie. Française du Congo)		5,500
Do.....	(Société La Haut Sangha)	8,000
Do.....		1,000

Société Générale de Commerce.....	(Almatienne)	1,500
Do.....	(Société La Laboy)	7,500
Société Coloniale Anversoise.....	(Cie. du Kasai)	65,000
Comptoir des Produits Coloniaux..	(Société "N'Goko")	2,000
Do.....	(Sangha)	1,000
L. & W. Van de Velde.....		262,500

JUNE 6.—By the *Anversville*, from the Congo:

Bunge & Co.....	(Société Générale Africaine) kilos	62,000
Do.....		9,000
Do.....	(Chemins de fer Grand Lacs)	13,000
Do.....	(Société A B I R)	10,000
Comptoir Commercial Congolais.....		2,000
L. & W. Van de Velde.....	(Cie. du Kasai)	12,000
Société Coloniale Anversoise.....	(Sud Kamerun)	6,000
Do.....	(Belge du Haut Congo)	3,000
Do.....	(Cie. de Lomami)	3,000
M. S. Cols.....	(Alima)	4,000
Cie. Commerciale des Colonies..	(La Haut Sangha)	7,000
Do.....		2,000
		133,000

**Liverpool.**

WILLIAM WRIGHT &amp; Co. report [June 1]:

*Fine Para.*—The market in the early part of the month was active, and prices of Upriver and Islands fine advanced to 5s. 9d.; since then the demand has been slow, to day's spot value being 5s. 8½d. for Upriver, and 5s. 8¾d. for Islands. There is, however, a strong undercurrent of strength in the market, as in spite of the fact that receipts are considerably in excess of the revised estimate, prices have only declined ½d per pound, very little offering. The forward market has been quiet; a good business could have been done, but in the present strong statistical position sellers will only offer to a limited extent. Any resumption of the American demand would mean an immediate rise in values.

EDMUND SCHLÜTER &amp; Co. report [May 31]:

In the face of the increased supplies from Brazil during May it becomes difficult to see the necessity of again dearer prices, but there is not in Europe any surplus supply, while the accumulation in America is not available for market purposes, being held in reserve for the summer and autumn demand.

WM., JAS. & HY. THOMPSON, 38, Mincing lane, E. C., London, announce that in view of the great increase in the production of India-rubber, and notably in Ceylon and the Malay States, they have determined to open a department for its sale, which will be placed in charge, on and after July 3, of an expert who for more than 20 years has been actively associated with one of the leading Liverpool brokers in rubber.

**London.**

EDWARD TILL &amp; Co. report stocks [June 1]:

	1905.	1904.	1903.
Pará sorts.....	—	—	—
Borneo.....	27	22	13
Assam and Rangoon.....	8	5	5
Penang.....	224	—	—
Other sorts.....	201	227	209
<b>Total.....</b>	<b>460</b>	<b>254</b>	<b>227</b>
Pará.....	370	446	1402
Caucho.....	296	305	243
Other sorts.....	518	662	376
<b>Total, United Kingdom.....</b>	<b>1644</b>	<b>1667</b>	<b>2248</b>
<b>Total, May 1.....</b>	<b>1415</b>	<b>1644</b>	<b>2539</b>
<b>Total, April 1.....</b>	<b>1232</b>	<b>1367</b>	<b>2525</b>
<b>Total, March 1.....</b>	<b>1264</b>	<b>1136</b>	<b>1939</b>

## PRICES PAID DURING MAY.

	1905.	1904.	1903.
Para fine, hard.....	5/ 6 1/2 @ 5/ 6	4/ 9 @ 4/ 10 1/2	3/ 10 1/2 @ 3/ 10 1/4
Do soft.....	5/ 6 3/4 @ 5/ 8 1/2	4/ 8 @ 4/ 9 1/4	No sales
Negroheads, scrappy.....	4/ 0 1/2 @ 4/ 1	3/ 9	3/ 1 @ 3/ 1 1/4
Do Cametá.....	3/ 3 1/2 @ 3/ 4	2/ 11 @ 2/ 13	2/ 7 @ 2/ 9
Bolivian.....	5/ 7 @ 5/ 8 1/4	4/ 10 @ 4/ 11	No sales
Caucho, ball.....	3/ 4 @ 3/ 6	3/ 3 3/4 @ 3/ 5	3/ 0 1/2 @ 3/ 0 3/4
Do slab.....	3/ 1 @ 3/ 2	2/ 10 1/2 @ 2/ 11	2/ 4 1/2 @ 2/ 6
Do tails.....	3/ 1 1/2 @ 3/ 3	3/ 2 @ 3/ 2 1/2	No sales



## AUCTION SALES REPORT.

JUNE 9.—The market for Pará has been very quiet, and scarcely any business has been done, but prices are without quotable change. Fine hard on the spot sold at 5s. 8½d. and buyers, and entrefine at 5s. 7d.; July-August delivery hard sold at 5s. 8¾d. @ 5s. 9d. Soft fine near delivery sold at 5s. 8½d., and entrefine at 5s. 6½d. At auction to-day the small supplies met a slow market, but prices were steady for fair to good qualities. Central American: Softish scrap sold at 3s. 3½d. @ 3s. 3¾d., fair black slab, 2s. 10¾d. Colombian virgin scrap and slab, 3s. 8s. @ 3s. 8¼d. Mozambique: Lamu ball part slightly heated, 3s. 7d. @ 3s. 8d., red and white ball 3s. 10d., Madagascar good mottled mixed pinky 3s. 2d. Benguela niggers 3s. 4d.

## PLANTATION RUBBER.

JUNE 28 Auction.—Ceylon and Straits: 53 packages offered and 78 sold; fine washed pale Straits (lace or crepe rubber) at 6s. 9¾d. [= \$1.65¾]; fine thin pale and dark biscuits, 6s. 9d. @ 6s. 9¼d.; ditto rather dark, 6s. 7d. @ 6s. 8d.; good to fine clean scrap, 4s. 6s. @ 5s. 5s. Assam: Fine red plantation (*Hevea* *distica*), at 4s. 11½d. [= \$1.20½]; grayish ditto 4s. 7d.

JUNE 9 Auction.—Ceylon: Of 67 packages offered, 20 sold; fine biscuits at 6s. 7d. @ 6s. 8d.; scrap, good to fine dry at 5s. 4d. @ 5s. 7½d.; clean dark pressed sheet at 5s. 4d.

## Venezuela.

BALATA.—O. Engelhardt of Ciudad Bolivar reports in *Der Tropenpflanzer* (Berlin) a small crop for 1904, owing to low prices, many gatherers having quit the field. Up to June 30 of that year only about 100,000 kilograms exported, of which 40,000 were lost by the foundering of the steamer *Whitney* on the Orinoco.—Former exports of Balata were as follows:

In 1896.....	kilos 75,000	In 1900.....	kilos 1,216,268
In 1897.....	295,733	In 1901.....	1,196,414
In 1898.....	494,168	In 1902.....	816,752
In 1899.....	749,572	In 1903.....	1,094,578

RUBBER.—Total exports for 1903 are stated at 93,000 kilograms, the greater part of which was shipped by Manãos on the rio Negro. Disturbed political conditions are mentioned as having interfered with the securing of later official statistics.

## Manaos Rubber Receipts.

DURING April and ten months of the crop season for three years [courtesy of Messrs. Witt & Co.]:

FROM	APRIL			TOTAL APRIL		
	1902	1903	1904	1902	1903	1904
Rio Purús Acre.....	308	360	452	5709	5825	5492
Rio Madeira.....	85	84	86	2713	2528	2100
Rio Jurua.....	567	345	238	3710	3459	3303
Rio Javary—Iquitos.....	131	23	55	2528	2266	1473
Rio Solimões.....	58	73	37	846	808	1305
Rio Negro.....	133	38	96	609	422	635
Total.....	1282	926	967	10,304	11,948	14,458
Caucho.....	540	405	619	3802	3168	2758
Total.....	1822	1334	1586	20,106	15,116	17,216

DURING May and eleven months of the crop season for three years [courtesy of Messrs. Witt & Co.]:

FROM	MAY			TOTAL MAY		
	1902	1903	1904	1902	1903	1904
Rio Purús Acre.....	421	355	420	7120	5883	5912
Rio Madeira.....	187	113	89	2872	2041	2240
Rio Jurua.....	192	185	183	3911	3644	3576
Rio Javary—Iquitos.....	64	13	24	2592	2210	1502
Rio Solimões.....	36	20	43	852	828	1348
Rio Negro.....	57	46	16	787	468	651
Total.....	829	735	780	17,133	15,053	15,238
Caucho.....	484	632	596	4286	3800	3354
Total.....	1313	1367	1376	21,419	18,853	18,592

## Para.

KANTHACK & Co. report [June 10]:

Rubber.—No new feature has altered the attitude of the market, and with the continuance of steady buying and light receipts, considerable

firmness has been in evidence. Prices, however, seem to have reached their extreme point, and have remained almost stationary. Receipts so far this crop [since July 1, 1904] are about 32,110 tons, against 29,620 tons same time last year, thus showing an increase of about 8½ per cent.

## EMBARGO ON RUBBER FROM THE ACRE.

MR. FELIPPE MORENO MANESCHY, the pilot of the steamer *Iracema*, which arrived yesterday at the "Arinos" from Acre, informed a representative of this paper that the tax collector of the state of Amazonas will lay an embargo on the vessel, to prevent its sailing to Belém [Para], its port of destination. The motive for the action of the tax department is to be found in the fact that the *Iracema* carries various lots of rubber embarked in the Federal territory of Acre, the tax on which the collector intends to collect.—*A Provincia de Para*, June 9.

## The Congo Rubber Movement.

EXPORTS of rubber from the Congo Free State during 1904 are officially stated as follows:

	Kilos.	Value.
Total rubber exports.....	5,764,644	51,881,796 francs
Product of the State.....	4,830,939	43,478,451 "

## French Indo-China.

RUBBER Exports for 1904:

From Tonkin.....	kilos 164,160
From Saigon.....	12,918
From Cambodia.....	99
Total, 1903.....	177,177
	78,675

—*Bulletin Economique*, March, 1905.

## Philippine Islands.

THE bureau of forestry reports the collection of the following, from public lands, during the year ended June 30, 1904:

Gutta percha.....	pounds 50,856
India-rubber.....	8,593

## Ceylon Exports (Plantation Rubber).

	POUNDS.	POUNDS.
January 1 to April 17.....	30,853	Week ending May 22..... 2,754
Week ending April 24.....	—	—
Week ending May 1.....	1,137	Total..... 39,770
Week ending May 8.....	727	Same period, 1904..... 28,693
Week ending May 15.....	4,299	Same period, 1905..... 17,347

## DESTINATION.

Great Britain.....	25,544	United States..... 2,872
Germany.....	10,207	Australia..... 1,147

## IMPORTS FROM PARA AT NEW YORK.

[The Figures Indicate Weights in Pounds.]

JUNE 2.—By the steamer *Polycarp* from Manãos and Pará:

IMPORTERS.	Fine.	Medium.	Coarse.	Caucho.	Total.
A. T. Morse & Co.....	30,100	15,100	106,800	64,600=	216,600
Poel & Arnold.....	9,100	—	25,600	20,900=	55,600
New York Commercial Co.	3,400	300	15,400	20,600=	39,700
Hagemeyer & Brunn.....	8,100	1,300	4,800	600=	14,800
Neale & Co.....	8,500	2,300	1,500	1,400=	13,700
General Rubber Co.....	300	—	8,400	3,000=	11,700
Edmund Reeks & Co.....	—	—	—	5,100=	5,100
G. Amsinck & Co.....	—	4,000	—	—	4,000
Lionel Hagenaers & Co..	900	—	700	—	1,600
Total.....	60,400	23,000	163,200	116,200=	362,800

JUNE 15.—By the steamer *Maranhense*, from Manãos and Pará:

New York Commercial Co.	131,500	37,400	53,000	7,600=	249,500
A. T. Morse & Co.....	21,300	9,800	30,500	47,900=	109,500
Poel & Arnold.....	2,100	700	52,700	65,300=	120,800
Lawrence Johnson & Co.	—	—	5,600	21,900=	27,500
General Rubber Co.....	3,000	200	32,000	8,800=	44,000
Lionel Hagenaers & Co..	18,700	—	2,800	—	21,500
Thomsen & Co.....	13,300	—	4,300	—	17,600
Edmund Reeks & Co.....	3,000	—	400	14,600=	18,000
G. Amsinck & Co.....	1,200	1,600	1,300	10,300=	14,400
Hagemeyer & Brunn.....	—	—	—	6,000=	6,000
Neale & Co.....	2,400	300	900	—	3,600
Herbst Brothers.....	1,100	—	900	—	2,000
Total.....	197,600	50,000	184,400	182,400=	614,400

June 23.—By the steamer *Grangense*, from Manáos and Pará:

A. T. Morse & Co.	44,700	3,900	35,100	55,000	138,700
Poel & Arnold	36,800	6,100	40,200	41,200	124,300
New York Commercial Co.	59,600	19,000	38,500	1,600	118,700
General Rubber Co.	10,200	1,600	40,400	24,000	66,200
G. Amsinck & Co.	11,300	3,000			14,300

Lionel Hageners & Co.	6,500	4,100	10,600
Hageners & Brunn	5,200	2,800	8,000
Total	174,300	30,600	154,100

The steamer *Amazonas*, from Pará, is due at New York July 3, with  
 [Name] [Amount] [Amount] [Amount] [Amount]

## PARA RUBBER VIA EUROPE.

MAY 27.—By the <i>Lorraine</i> —Havre:	
Poel & Arnold (Fine)	4,500
JUNE 1.—By the <i>Cypria</i> —Mollendo:	
F. Rosenstein & Co. (Fine)	7,500
George A. Alden & Co. (Fine)	7,000
JUNE 1.—By the <i>Menzanar</i> —Cuidad Bolívar:	
Thebaud Brothers (Fine)	12,500
Thebaud Brothers (Coarse)	4,000
JUNE 6.—By the <i>Bovic</i> —Liverpool:	
Wallace L. Gough (Cauchó)	5,500
Poel & Arnold (Medium)	2,000
JUNE 10.—By the <i>Lucania</i> —Liverpool:	
George A. Alden & Co. (Cauchó)	34,000
JUNE 12.—By the <i>Cedric</i> —Liverpool:	
Poel & Arnold (Cauchó)	26,000
Wallace L. Gough (Cauchó)	11,000
Wallace L. Gough (Fine)	11,000
JUNE 15.—By the <i>Granada</i> —Trinidad:	
Thebaud Brothers (Coarse)	4,500
JUNE 19.—By the <i>Etruria</i> —Liverpool:	
George A. Alden & Co. (Cauchó)	45,000

## OTHER ARRIVALS IN NEW YORK

## CENTRALS.

MAY 25.—By the <i>Finance</i> —Colon:	
J. A. Medina & Co.	4,500
E. B. Strout	2,800
Silva Bussenius & Co.	2,000
Isaac Brandon & Bros.	1,700
Smithers, Nordenholt & Co.	700
G. Amsinck & Co.	500
Lawrence Johnson & Co.	500
MAY 27.—By the <i>Esperanza</i> —Mexico:	
E. Steiger & Co.	3,000
Harburger & Stack	3,500
H. Marquardt & Co.	2,500
L. N. Chemedin & Co.	1,000
MAY 29.—By the <i>St. Paul</i> —London:	
J. H. Rossbach & Bros.	10,000
A. T. Morse & Co.	4,500
Henry A. Gould Co.	2,500
MAY 29.—By the <i>Orizaba</i> —Colon:	
G. Amsinck & Co.	14,000
J. A. Medina & Co.	5,900
Hirzel, Feltman & Co.	1,000
Andean Trading Co.	600
A. Rosenthal's Sons	800
Silva, Bussenius & Co.	600
E. B. Strout	600
Gabriel Perigault	500
MAY 29.—By the <i>El Dorado</i> —New Orleans:	
A. N. Rotholz	2,500
A. T. Morse & Co.	1,700
JUNE 1.—By the <i>Oceanic</i> —Liverpool:	
A. T. Morse & Co.	7,000
JUNE 1.—By the <i>Menzanar</i> —Cuidad Bolívar:	
Kunhardt & Co.	2,500
Middleton & Co.	1,000
Thebaud Brothers	1,000
JUNE 2.—By the <i>Pennsylvania</i> —Hamburg:	
Poel & Arnold	18,500
A. T. Morse & Co.	3,500
JUNE 5.—By the <i>El Paso</i> —New Orleans:	
A. T. Morse & Co.	16,000
Manhattan Rubber Mfg. Co.	9,000
Eggers & Heinlein	2,000
JUNE 5.—By the <i>Vigilancia</i> —Mexico:	
Harburger & Stack	4,500
H. Marquardt & Co.	2,000
Strube & Utze	3,500
Graham, Hinkley & Co.	1,000
Thebaud Brothers	1,000
Markt, Struller & Co.	600
American Trading Co.	500
JUNE 6.—By the <i>Sequencia</i> —Colon:	
Hirzel, Feltman & Co.	8,000
G. Amsinck & Co.	6,300
American Trading Co.	3,300
Dumarest Bros. & Co.	3,100
A. Santos & Co.	2,300
Gabriel Perigault	2,000
Lawrence Johnson & Co.	1,800

## CENTRALS (Continued)

Meeke & Co.	800
Canham & Kemp	1,400
JUNE 7.—By the <i>Sarnia</i> —Colombia:	
G. Amsinck & Co.	2,500
Isaac Brandon & Bros.	2,200
Isaac Kubie & Co.	2,000
D. A. De Lima & Co.	2,000
A. A. Lindo & Co.	1,000
Kunhardt & Co.	700
Banco Exportaciones	600
JUNE 12.—By the <i>St. Louis</i> —London:	
J. H. Rossbach & Bros.	13,000
JUNE 12.—By the <i>Havana</i> —Mexico:	
H. Marquardt & Co.	4,000
L. N. Chemedin & Co.	4,000
Harburger & Stack	1,100
Graham Hinkley & Co.	500
JUNE 12.—By the <i>El Monte</i> —New Orleans:	
A. T. Morse & Co.	6,000
Manhattan Rubber Mfg. Co.	2,000
A. N. Rotholz	2,000
JUNE 12.—By the <i>Adriana</i> —Colon:	
G. Amsinck & Co.	5,000
Piza Nephews & Co.	1,400
A. Santos & Co.	1,300
Isaac Brandon & Bros.	1,300
Eggers & Heinlein	1,000
Gabriel Perigault	700
JUNE 17.—By the <i>Monterrey</i> —Mexico:	
Harburger & Stack	4,500
E. Steiger & Co.	2,500
E. N. Tibbals Co.	1,300
Thebaud Brothers	500
American Trading Co.	500
H. Marquardt & Co.	500
For order	20,000
JUNE 19.—By the <i>Byron</i> —Bahia:	
Hirsch & Kaiser	57,000
J. H. Rossbach & Bros.	34,000
American Commercial Co.	14,000
A. D. Hitch & Co.	9,000
Lawrence Johnson & Co.	4,000
JUNE 16.—By the <i>Albania</i> —Colon:	
G. Amsinck & Co.	3,600
J. A. Medina & Co.	2,300
Meyer Hecht	2,400
H. Marquardt & Co.	2,200
E. B. Strout	1,300
A. A. Lindo & Co.	1,100
Lawrence Johnson & Co.	700
A. Rosenthal's Sons	700
Fred. Probst & Co.	500
Silva Bussenius & Co.	500
Gabriel Perigault	800
JUNE 19.—By the <i>El Dorado</i> —New Orleans:	
G. Amsinck & Co.	2,500
Silva, Bussenius & Co.	1,000
A. T. Morse & Co.	3,000
Andreas & Co.	1,000
JUNE 19.—By the <i>Finance</i> —Colon:	
Meeke & Co.	3,000
Roldan Van Sickle	3,000
G. Amsinck & Co.	2,600
Isaac Brandon & Bros.	2,600
A. M. Capen Sons	1,400
Hirzel, Feltman & Co.	1,200
Dumarest Bros. & Co.	500
A. Santos & Co.	700
JUNE 20.—By the <i>Sibiria</i> —Colombia:	
Isaac Kubie & Co.	2,200
Kunhardt & Co.	800
G. Amsinck & Co.	800
Pedro A. Lopez	500
G. T. Fajardo	800
Isaac Brandon & Bros.	500
JUNE 23.—By the <i>Esperanza</i> —Mexico:	
Harburger & Stack	2,500
E. Steiger & Co.	2,000
Thebaud Brothers	1,000
H. Marquardt & Co.	1,200
Fred. Probst & Co.	1,000
W. Louza & Co.	500
JUNE 22.—By the <i>Teutonic</i> —Liverpool:	
Earle Brothers	7,000
JUNE 23.—By the <i>Orizaba</i> —Colon:	
Hirzel, Feltman & Co.	8,600
G. Amsinck & Co.	2,100
Piza, Nephews & Co.	1,100
Gabriel Perigault	900
Williams & Terhune	700

## AFRICANS.

MAY 25.—By the <i>Teutonic</i> —Liverpool:	
George A. Alden & Co.	45,000
A. T. Morse & Co.	11,000
Poel & Arnold	5,000
MAY 27.—By the <i>Campania</i> —Liverpool:	
George A. Alden & Co.	28,000
Wallace L. Gough	5,000
MAY 29.—By the <i>Celtic</i> —Liverpool:	
General Rubber Co.	139,000
Poel & Arnold	6,000
MAY 31.—By the <i>Armenia</i> —Hamburg:	
Poel & Arnold	30,000
A. T. Morse & Co.	12,000
George A. Alden & Co.	10,000
Rubber Trading Co.	2,000
MAY 31.—By the <i>Georgic</i> —Liverpool:	
General Rubber Co.	11,000
Wallace L. Gough	2,500
JUNE 1.—By the <i>Oceanic</i> —Liverpool:	
General Rubber Co.	67,000
Poel & Arnold	64,000
A. W. Brunn	25,000
JUNE 2.—By the <i>Pennsylvania</i> —Hamburg:	
A. T. Morse & Co.	46,000
Poel & Arnold	10,000
George A. Alden & Co.	8,000
Rubber Trading Co.	4,000
JUNE 5.—By the <i>Umbria</i> —Liverpool:	
A. T. Morse & Co.	30,000
General Rubber Co.	6,500
Wallace L. Gough	5,000
JUNE 7.—By the <i>Caronia</i> —Liverpool:	
George A. Alden & Co.	27,000
JUNE 8.—By the <i>Bovic</i> —Liverpool:	
Wallace L. Gough	22,500
A. W. Brunn	15,000
JUNE 10.—By the <i>Lucania</i> —Liverpool:	
George A. Alden & Co.	22,500
JUNE 12.—By the <i>Cedric</i> —Liverpool:	
George A. Alden & Co.	33,000
Wallace L. Gough	10,000
JUNE 13.—By the <i>Fricka</i> —Bordeaux:	
Rubber Trading Co.	11,000
A. T. Morse & Co.	3,500
Wallace L. Gough	5,500
JUNE 11.—By the <i>Rhaetia</i> —Hamburg:	
A. T. Morse & Co.	32,000
Poel & Arnold	22,000
George A. Alden & Co.	16,000
Earle Brothers	15,000
A. W. Brunn	9,000
JUNE 13.—By the <i>Vaderland</i> —Antwerp:	
A. T. Morse & Co.	80,000
Poel & Arnold	25,000
JUNE 15.—By the <i>Hudson</i> —Havre:	
Henry A. Gould Co.	9,000
Poel & Arnold	3,500
JUNE 16.—By the <i>Patricia</i> —Hamburg:	
Rubber Trading Co.	19,000
JUNE 19.—By the <i>Etruria</i> —Liverpool:	
Poel & Arnold	8,000
Wallace L. Gough	8,500
JUNE 20.—By the <i>Kronland</i> —Antwerp:	
Poel & Arnold	147,000
George A. Alden & Co.	76,000
Rubber Trading Co.	24,000
JUNE 22.—By the <i>Cube</i> —Liverpool:	
Poel & Arnold	89,000
General Rubber Co.	22,000
George A. Alden & Co.	7,000
JUNE 23.—By the <i>Pretoria</i> —Hamburg:	
A. T. Morse & Co.	52,000
George A. Alden & Co.	45,000
Poel & Arnold	22,000
A. W. Brunn	2,000
JUNE 31.—By the <i>Campania</i> —Liverpool:	
Poel & Arnold	50,000
A. W. Brunn	11,000
A. T. Morse & Co.	3,000



## EAST INDIAN.

MAY 25.—By the <i>Feutonia</i> =Liverpool:	
Poel & Arnold .....	6,300
MAY 31.—By the <i>St. Fillans</i> =Singapore:	
George A. Alden & Co .....	20,000
Poel & Arnold .....	20,000
Robert Branss & Co .....	12,000
Winter & Smille .....	13,000
Wallace L. Gough .....	11,000
JUNE 6.—By the <i>Minnetonka</i> =London:	
George A. Alden & Co .....	15,000
Wallace L. Gough .....	5,500
Poel & Arnold .....	3,500
JUNE 7.—By the <i>Caroma</i> =Liverpool:	
Poel & Arnold .....	15,000
JUNE 7.—By the <i>Mashona</i> =Calcutta:	
Poel & Arnold .....	34,000
George A. Alden & Co .....	3,000
JUNE 19.—By the <i>Griqua</i> =Calcutta:	
Poel & Arnold .....	9,000
A. T. Morse & Co .....	3,000
JUNE 19.—By the <i>Minnetonka</i> =London:	
George A. Alden & Co .....	6,500
JUNE 24.—By the <i>Crastels</i> =Calcutta:	
Geo. A. Alden & Co .....	8,500
GUTTA-JELUTONG.	
MAY 31.—By the <i>St. Fillans</i> =Singapore:	
Poel & Arnold .....	160,000
George A. Alden & Co .....	150,000
Winter & Smille .....	115,000
Windmuller & Reolker .....	180,000
Heabler & Co .....	100,000
Robert Branss & Co .....	100,000
GUTTA-PERCHA AND BALATA.	
MAY 29.—By the <i>Armenia</i> =Hamburg:	
To Order .....	17,000
A. W. Brunn .....	2,000
MAY 31.—By the <i>St. Fillans</i> =Singapore:	
Windmuller & Reolker .....	4,500

## GUTTA-PERCHA AND BALATA—Continued.

JUNE 6.—By the <i>Minnetonka</i> =London:	
A. W. Brunn .....	5,500
JUNE 12.—By the <i>Columbia</i> =Glasgow:	
Kempshall Mfg. Co .....	2,500
JUNE 16.—By the <i>Patricia</i> =Hamburg:	
To Order .....	7,000
JUNE 19.—By the <i>Minnetonka</i> =London:	
A. W. Brunn .....	15,000
Wallace L. Gough .....	9,000
B. F. Goodrich Co .....	3,500
JUNE 24.—By the <i>Patricia</i> =Hamburg:	
To Order .....	6,000
BALATA.	
MAY 29.—By the <i>Fontaine</i> =Demerara:	
Charles P. Shilstone .....	4,500
JUNE 1.—By the <i>Oceanic</i> =Liverpool:	
Joseph Cantor .....	4,500
JUNE 1.—By the <i>Menzanara</i> =Cuidad Bolivar:	
Thebaud Brothers .....	20,000
A. H. Wappas .....	23,000
JUNE 12.—By the <i>Korona</i> =Demerara:	
Charles P. Shilstone .....	2,500
Maitland, Coppel & Co .....	1,000
JUNE 15.—By the <i>Grenada</i> =Trinidad:	
Frame & Co .....	4,500
G. Amsinck & Co .....	1,000

## CUSTOM HOUSE STATISTICS.

## PORT OF NEW YORK—MAY.

Imports:	POUNDS.	VALUE.
India-rubber .....	3,197,403	\$2,276,094
Gutta-percha .....	31,782	12,495
Gutta-jelutong (Pontianak) .....	2,408,867	87,232
Total .....	5,638,052	\$2,375,821

## CUSTOM HOUSE STATISTICS—Continued.

<b>Exports:</b>		
India-rubber .....	42,089	\$32,752
Reclaimed rubber .....	71,459	9,053
Rubber Scrap Imported .....	498,114	\$32,373
<b>BOSTON ARRIVALS.</b>		
POUNDS.		
MAY 9.—By the <i>Devonian</i> =Liverpool:		
George A. Alden & Co.—African .....	56,000	
George A. Alden & Co.—Centrals .....	7,460	63,460
MAY 10.—By the <i>Devonian</i> =Liverpool:		
George A. Alden & Co.—African .....		7,281
MAY 10.—By the <i>Sachem</i> =Liverpool:		
George A. Alden & Co.—East Indian .....		1,898
MAY 15.—By the <i>Bucrania</i> =Calcutta:		
George A. Alden & Co.—East Indian .....		3,906
MAY 17.—By the <i>Anglian</i> =London:		
George A. Alden & Co.—African .....	4,000	
George A. Alden & Co.—Centrals .....	3,000	
George A. Alden & Co.—East Indian .....	14,997	21,997
MAY 17.—By the <i>Astoria</i> =Hamburg:		
George A. Alden & Co.—African .....	8,000	
George A. Alden & Co.—Centrals .....	22,668	30,668
MAY 19.—By the <i>Canadian</i> =Liverpool:		
George A. Alden & Co.—African .....	9,021	
George A. Alden & Co.—African .....	67,553	76,574
MAY 27.—By the <i>Bohemian</i> =Liverpool:		
George A. Alden & Co.—African .....		27,570
MAY 29.—By the <i>Michigan</i> =Liverpool:		
George A. Alden & Co.—Centrals .....		18,268
Total .....		251,622
[Value, \$176,513.]		

## OFFICIAL STATISTICS OF CRUDE INDIA-RUBBER (IN POUNDS).

## UNITED STATES.

MONTHS.	IMPORTS.	EXPORTS.	NET IMPORTS.
April, 1905 .....	6,193,588	406,365	5,787,223
January-March .....	20,412,435	728,348	25,684,087
Four months, 1905 .....	32,606,023	1,134,713	31,471,310
Four months, 1904 .....	28,222,397	1,126,041	27,095,706
Four months, 1903 .....	20,072,501	999,095	19,073,406

## GERMANY.

MONTHS.	IMPORTS.	EXPORTS.	NET IMPORTS.
April, 1905 .....	3,645,620	867,240	3,645,620
January-March .....	11,233,860	4,007,300	7,226,560
Four months, 1905 .....	14,879,480	4,874,540	10,004,940
Four months, 1904 .....	12,143,780	3,779,600	8,364,180
Four months, 1903 .....	12,769,240	5,073,640	7,695,600

## FRANCE.\*

MONTHS.	IMPORTS.	EXPORTS.	NET IMPORTS.
April, 1905 .....	3,051,400	2,704,020	347,380
January-March .....	7,165,180	2,891,980	4,270,200
Four months, 1905 .....	10,216,580	5,594,000	4,617,580
Four months, 1904 .....	7,645,220	5,028,760	2,616,460
Four months, 1903 .....	5,884,080	2,774,200	2,779,920

## BELGIUM.

MONTHS.	IMPORTS.	EXPORTS.	NET IMPORTS.
April, 1905 .....	2,066,310	1,075,780	990,521
January-March .....	4,205,913	3,000,740	1,204,973
Four months, 1905 .....	6,272,223	4,176,720	2,195,494
Four months, 1904 .....	6,031,542	5,154,095	877,444
Four months, 1903 .....	5,374,280	3,408,302	1,965,978

## GREAT BRITAIN.

MONTHS.	IMPORTS.	EXPORTS.	NET IMPORTS.
April, 1905 .....	5,783,232	2,586,640	3,196,592
January-March .....	15,993,376	10,248,456	5,744,920
Four months, 1905 .....	21,776,608	12,835,096	8,941,512
Four months, 1904 .....	21,299,264	12,833,414	8,465,850
Four months, 1903 .....	20,578,768	13,300,744	7,269,024

## ITALY.

MONTHS.	IMPORTS.	EXPORTS.	NET IMPORTS.
April, 1905 .....	.....	.....	.....
January-March .....	417,340	66,220	351,120
Four months, 1905 .....	.....	.....	.....
Four months, 1904 .....	598,180	25,960	572,220
Four months, 1903 .....	640,080	25,960	614,120

## AUSTRIA-HUNGARY.

MONTHS.	IMPORTS.	EXPORTS.	NET IMPORTS.
April, 1905 .....	257,400	1,760	255,640
January-March .....	723,360	1,160	722,260
Four months, 1905 .....	980,760	2,860	977,900
Four months, 1904 .....	1,066,340	10,340	1,056,000
Four months, 1903 .....	959,640	12,320	947,320

NOTE.—German statistics include Gutta-percha, Balata, old rubber, and substitutes. French, Austrian, and Italian figures include Gutta-percha. The exports from the United States embrace the supplies for Canadian consumption.

\* General Commerce

† Special Commerce.

WILLIAM T. BAIRD, PRESIDENT

ROBERT B. BAIRD, VICE PRESIDENT

# RUBBER TRADING COMPANY

38 MURRAY STREET, NEW YORK

TELEPHONE: 1924 CORTLANDT

BOSTON OFFICE: 161 SUMMER STREET

TELEPHONE: 1599-2 OXFORD

CABLE ADDRESS: CHAUNBAIR, NEW YORK AND BOSTON

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Old Russian Rubber Boots *and* Shoes

M. J. WOLPERT

ODESSA, Russia

PICHER SUBLIMED  
WHITE AND BLUE LEAD

THE STANDARDS OF QUALITY FOR COMPOUNDING.

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**W**E have become thoroughly equipped for making **MOULDED ARTICLES IN RUBBER** of all kinds. We should like to have an opportunity of showing you what we can do. We shall be pleased to have you ask us to show you samples and prices. **IF YOU OWN MOULDS** let us show you how we can handle the goods for you.

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LA CROSSE, Wisconsin, U. S. A.

Mackintoshes Rubber Clothing Cloth by the Yard.

*For the India Rubber World, July 1, 1905.*

**Proofers of cloth for the trade.**

TRIPLEX DUCKS AND COTTON COVERTS

For Teamsters' Jackets.

CLOTHS FOR MACKINTOSHES.

**Heavy Calendered Sheetings & Drills.**

Silks, Velvets, Fine Specialties and Single Textures.

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Mould and Press Work.

The "Nerveze" Rubber Heel.

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**Pure Reclaimed Rubber**

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Mandrels, Cutting Gauges, Lathe Knives, Hand and Foot  
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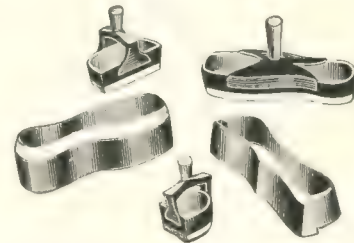
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MOLDS,  
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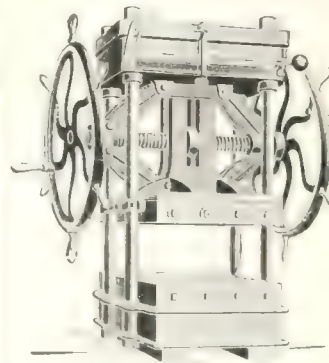
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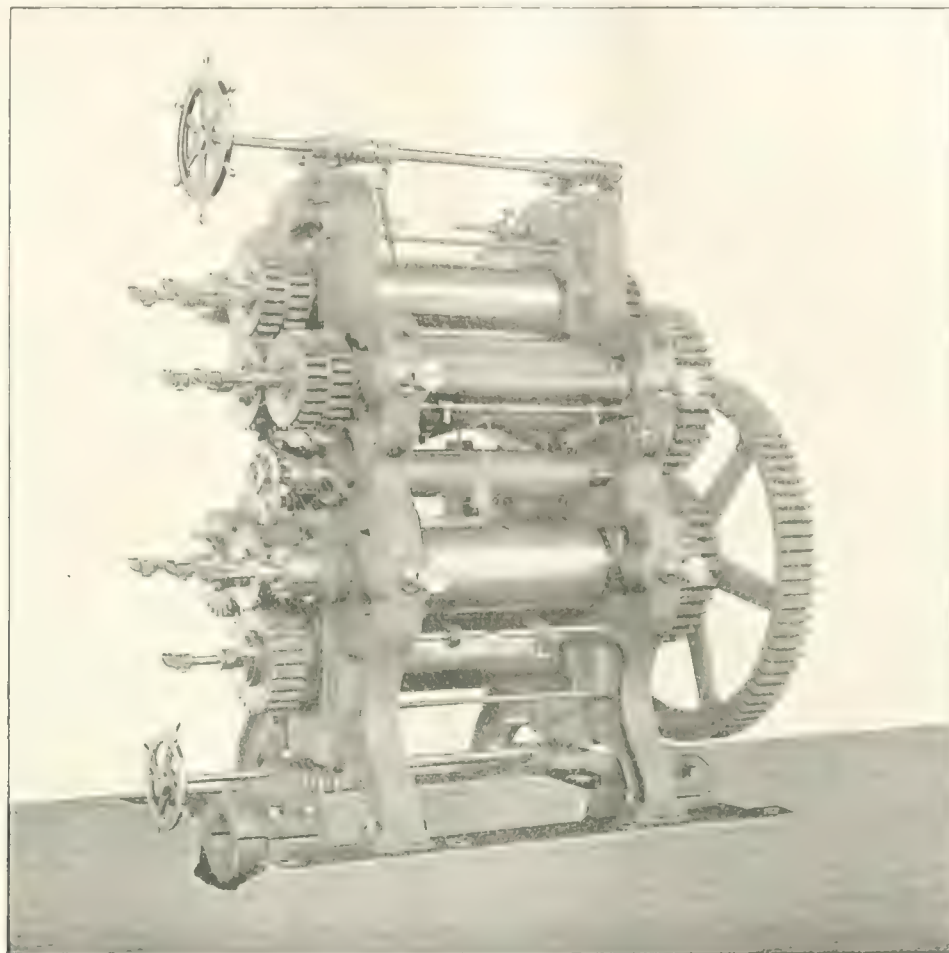
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PEARCE PATENT EIGHT ROLL DOUBLE SHEET CALENDER.

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SILICEOUS EARTH.

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Beeswax,  
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Japan Wax,  
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MINERAL RUBBER.

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This Composite is a Hydro Carbon  
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oxidation resistance of any rubber  
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much as 15% of it can be used in  
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The greatest of solvents.  
Non-inflammable.

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We are the largest manufacturers in the world, of the above products and have  
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We also manufacture

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THE BAKER AND ADAMSON CHEMICAL CO., Easton, Pa., Selling Agents for Carbon Tetrachloride, Chloride of Sulphur and Tin Oxide.

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First Qualities.  Brand.

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Always contains same constant percentage  
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RELIABLE, EFFECTIVE, AND OF HIGHEST GRADES.

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Sulphate and Carbonate of Barytes, Sulphate of Lime, etc.

GABRIEL & SCHALL, Importers.

205 PEARL STREET, - - - NEW YORK.

• PURE •  
SOFT  
SULPHUR

ESTABLISHED 1841.

INCORPORATED 1897.

**Bergen Port  
Sulphur Works**

ORIGINAL MANUFACTURERS  
OF

PURE SOFT SULPHUR

PREPARED ESPECIALLY FOR

Rubber Manufacturers.

T. & S. C. WHITE CO.,  
28 Burling Slip, NEW YORK.

Mention The India Rubber World when you write.

# BENZOL

Benzol and Coal Tar Naphtha for  
use in making rubber goods, and  
for the cold vulcanization of rub-  
ber, etc.

Samples and prices on application.

BARRETT MFG. CO.,  
PHILADELPHIA.

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# SULPHUR

BROOKLYN SULPHUR WORKS.

Manufacturers of

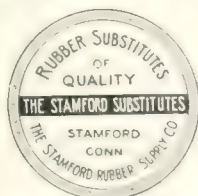
Double Refined and Sublimed  
FLOUR SULPHUR

Highly Alkalized for use of

RUBBER MANUFACTURERS  
AND WARRANTED FREE FROM GRIT.

**BATTELLE & RENWICK**

163 Front St., New York.



*Show High Grade Substitutes*





Established 1880

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Philadelphia  
Rubber Works  
Reclaimed  
Rubber

Philadelphia  
U. S. A.

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Foreign Representatives:

For Great Britain  
Kuhn & Co.,

31, Lombard Street, London, E. C.

For the Continent

H. P. Moorhouse,

29, Rue des Petites-Écuries, Paris.

# Hydraulic Steam Presses



All sizes and styles.

Molds of every description, nothing too small, nothing too large or complicated. Castings for iron work of every description.

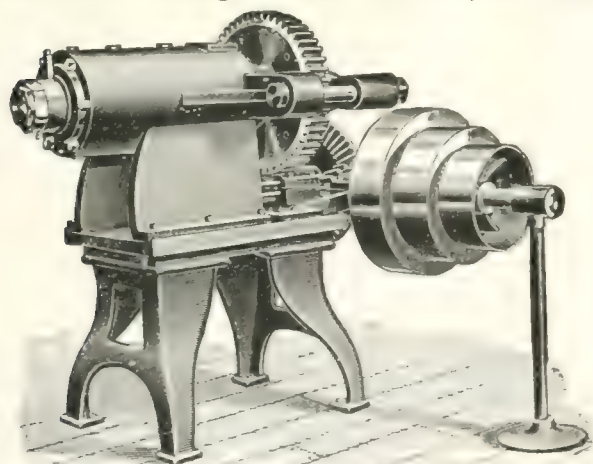
Let us figure with you.

**A. Adamson**  
Akron, O.

*Mention The India Rubber World when you write.*

# CLARK'S Reliable Tubing Machine

FOR THE MANUFACTURE OF RUBBER TUBING AND CORD,  
And also the Covering of Electrical and Telephone Cables.



MANUFACTURED IN 4 SIZES BY  
**EDRED W. CLARK, MACHINIST,**  
Rubber Moulds and Rubber Machinery, Screw and Hydraulic Presses a Specialty  
**No. 31 WELLS STREET, HARTFORD, CONN.**  
*Mention The India Rubber World when you write.*

7,000 MILES

and still in  
good condition.



THE MOST  
ALL-ROUND

**Satisfactory Tyres.**

Messrs. Thomas A. Little & Sons, of James Street, Cardiff, write on Oct. 25th 1904 to CLINCHER TYRES:

"The set of Tyres you supplied for our De Dion Car have given perfect satisfaction. They have done over 7,000 miles, and with the exception of a few cuts they are still in very good condition. We can certainly recommend your tyre if you keep up to this standard."

EQUALLY GOOD FOR HEAVY CARS.

Sole Manufacturers:

**THE NORTH BRITISH RUBBER CO., Ltd.,**  
Castle Mills: EDINBURGH, SCOTLAND.

*Mention The India Rubber World when you write.*

# WILLIAM R. THROPP

Manufacturer of

Rubber Washers, Grinders, Warmers,  
Sheeters, Refiners and Calenders  
AUTOMATIC JAR RING CUTTING LATHES  
Hydraulic, Steam and Knock Screw Presses  
IMPROVED DUCK SLITTERS  
Vulcanizers of all diameters and lengths  
Automobile & Vehicle Moulds a Specialty  
MOULDS AND SPECIAL MACHINERY  
TRENTON, N. J., U. S. A.

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# Embossing Calenders

For Artificial Leather, Table Oil Cloth,  
and Carriage Covers.

# Drying Machines

with Copper Cylinders for Cotton Duck,  
Drills and Sheeting.

# THE TEXTILE-FINISHING MACHINERY CO.,

PROVIDENCE R. I.

Southern Agent, **STUART W. CRAMER,**  
Trust Bldg., Charlotte, N. C. Equitable Bldg., Atlanta, Ga.  
*Mention The India Rubber World when you write.*



ESTABLISHED 1855.

**Geo. A. Alden & Co.,**

IMPORTERS OF

**India Rubber and  
Gutta Percha,****60 CHAUNCY STREET,****BOSTON.***Mention The India Rubber World when you write.*

ESTABLISHED 1859

**HAGEMEYER & BRUNN**

COMMISSION MERCHANTS

AGENTS LINHA DE VAPORES PORTUGUEZES

**IMPORTERS OF CRUDE RUBBER  
PARA, MANAOS AND BENQUELLA****No. 9 STONE STREET,****NEW YORK****E. BERS & CO.,**

COMMISSION MERCHANTS AND DEALERS IN

**NEW YORK HOUSE,****10½ DESBROSSES ST.**

FOREIGN AND DOMESTIC CORRESPONDENCE SOLICITED.

*Mention the India Rubber World when you write.***22 AND 24 So. DELAWARE AVE., PHILA.**

Established 1873

Cable Address,  
UNITMOSQUE.

P. O. Box 732.

**WM. H. CUMMINGS & SONS  
BUY AND SELL RUBBER SCRAP.****54-56 Harrison Street, New York, U. S. A.***Mention The India Rubber World when you write.***THEODORE HOFELLER & CO.,****Nos. 98-100-102-104-106-108 TERRACE, BUFFALO, N. Y., U. S. A.**

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A. B. C. and Lieber's Codes Used.

**LARGEST DEALERS IN OLD RUBBER IN THE WORLD.***Mention The India Rubber World when you write.***J. H. BRERETON & CO.,**

Ormond Street, LIVERPOOL.

**WASTE RUBBER and GUTTA PERCHA**

Correspondence Invited.

Cables, "Amber".

A. B. C. Code.

**SCRAP RUBBER**

AND SECOND-HAND RUBBER MACHINERY

BOUGHT AND SOLD BY

**W. C. COLEMAN CO.,****SETAUKET (Long Island)****NEW YORK.****A. W. BRUNN,****INDIA RUBBER BROKER,**

Representative of London and Liverpool Importers.

**Specialties: Africans, Borneos, and Pontianak.****2 and 4 STONE STREET,****NEW YORK.***Mention The India Rubber World when you write.***HIRSCH & KAISER, Inc.****Importers and Dealers in Brazil Manicoba and Sheet  
Rubber of all descriptions.****BRIDGE ARCH 17, Frankfort St., NEW YORK.****230-232 PURCHASE ST., BOSTON, MASS.**

TELEPHONE 316 JOHN

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**S. BIRKENSTEIN & SONS**

BUY AND SELL

**All kinds of RUBBER SCRAP****48-50-52 Michigan St., CHICAGO***Mention The India Rubber World when you write.*

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LIEBERS  
PRIVATE**SCRAP RUBBER,****22 AND 24 So. DELAWARE AVE., PHILA.**

Established 1873

Cable Address,  
UNITMOSQUE.

P. O. Box 732.

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BUY AND SELL RUBBER SCRAP.****54-56 Harrison Street, New York, U. S. A.***Mention The India Rubber World when you write.***THEODORE HOFELLER & CO.,****Nos. 98-100-102-104-106-108 TERRACE, BUFFALO, N. Y., U. S. A.**

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**SCRAP RUBBER**

AND SECOND-HAND RUBBER MACHINERY

BOUGHT AND SOLD BY

**W. C. COLEMAN CO.,****SETAUKET (Long Island)****NEW YORK.****FOR SALE.****Factory Rubber Waste from Rubber Cement**

Fifty-five cents a pound for July only.

SAMPLES SENT FREE OF CHARGE.

**UNITED STATES WASTE RUBBER CO.,****487 North Warren Avenue, BROCKTON, MASS.****H. P. RINDSKOPF****397-399-401 Sumner Avenue, - - BROOKLYN, N. Y.**

BUYS AND SELLS

**RUBBER SCRAP.**

SEND ME A SAMPLE AND I WILL MAKE CASH OFFER.

Refers to R. G. DUN &amp; CO., New York, and FIRST NATIONAL BANK, Brooklyn.

THEO. S. BASSETT, President.  
MAX LOEWENTHAL, Treasurer.

S. A. LOEWENTHAL, Vice-President  
WALTER T. ROSEN, Secretary.

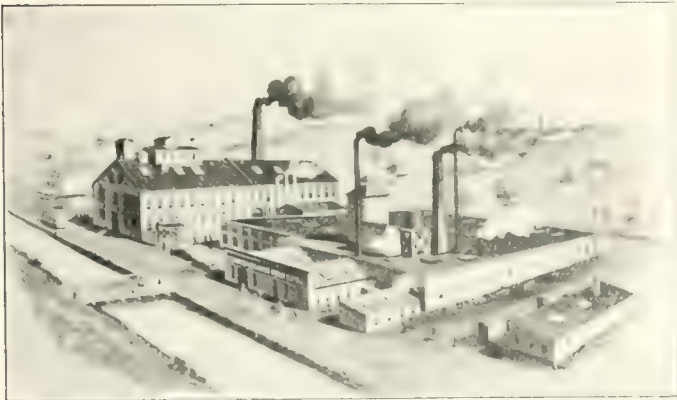
# U. S. RUBBER RECLAIMING WORKS.

## Manufacturers of RECLAIMED RUBBER.

Offices: No. 127 DUANE STREET, NEW YORK.



FACTORY AT BUFFALO, N. Y.



FACTORY No. 1, SHELTON, CONN



FACTORY No. 2, SHELTON, CONN

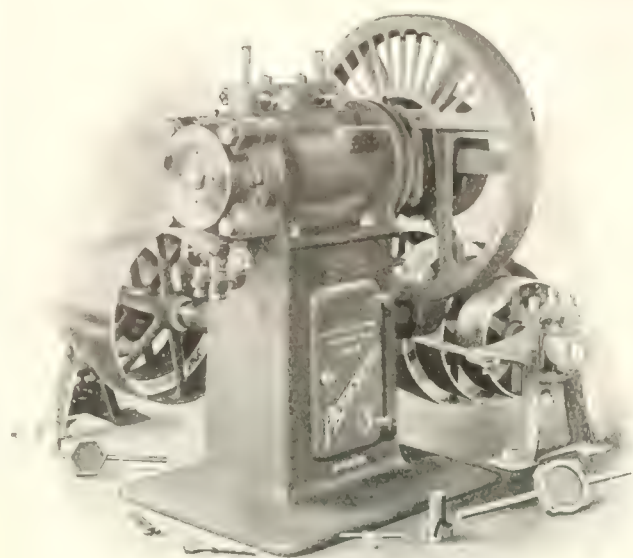
### FOREIGN REPRESENTATIVES:

WM. SOMERVILLE'S SONS, 3, Cooper's Row, Liverpool, England,  
Great Britain and the Continent of Europe.

*Mention The India Rubber World when you write.*



## THREE GREAT PRINCIPLES



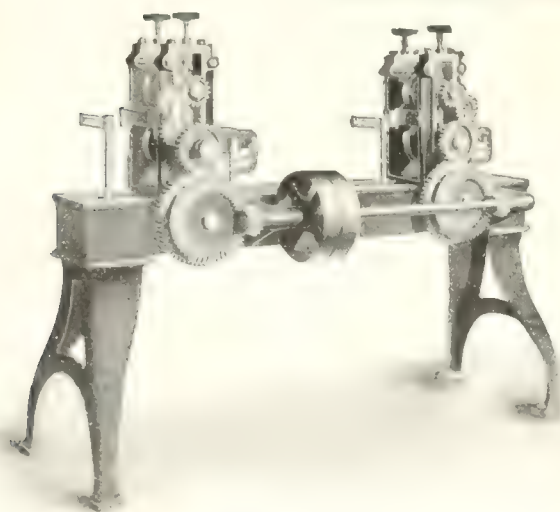
necessary in the successful operation of Tubing Machines, are Power, Speed, and Temperature. The Royle Perfected Tubing Machines not only set an example of excellence in this direction, but these particular features are under such perfect control, that each of them may be regulated independently without any interference to the others. The enormous productive capacity of these machines, insures profitable service, and all who would serve their best interests should investigate by writing to

**JOHN ROYLE & SONS,**  
PATERSON, N. J., U. S. A.

*Mention The India Rubber World when you write.*

## NEW ENGLAND BUTT COMPANY, PROVIDENCE, RHODE ISLAND.

MANUFACTURERS OF MACHINERY.



TWO HEAD RUBBER COVERING MACHINE.

**Rubber Strip Covering Machines**  
For Covering Electrical Wires.

**Strip Cutters and Rubber**  
**Spreading Machines.**

**Braiders for Covering Rubber Hose.**

**Complete Line of Machinery for Insu-**  
**lating Electrical Wires and Cables.**

**FINE CASTINGS A SPECIALTY.**

*Mention The India Rubber World when you write.*

# Dixon's Graphite Gear Grease

Prevents NOISE  
Prevents WEAR  
SAVES MONEY  
SAMPLES  
FREE

Joseph Dixon Crucible Co., Jersey City, N. J.

## STEPHEN P. SHARPLES,

ANALYTICAL AND CONSULTING  
CHEMIST.

Twenty-five Years' Experience in  
Methods for Recovering Rubber  
from Waste.

Analysis Made of Compounded  
Rubbers.



OFFICE:

No. 26 Broad Street, Boston, Mass.

## RUBBER

and other Tropical Seeds and Plants.

*Hevea Brasiliensis* (Para rubber) seeds supplied from August to October every year; booking necessary before the end of July to avoid disappointments. Stumps of both kinds shipped all the year round.

*Castilloa Elastica* seeds from June to October delivery.

*Manihot Glaziovii* (Ceará rubber) seeds supplied always. *Ficus elastica*, *Landolphia Kirkii*, *Parsonia latifolia*, *Uncaria tomentosa*, and other Rubber seeds and plants available several times in the year.

Tea of different sorts, Hybrid Coffee, Nutmeg, Fibers, Shade and Timber trees; Fruits, etc.—Seeds, Plants and Grafts supplied. Six different descriptive Price Lists, with special offers of *Hevea* and *Castilloa* seeds and stumps, on view at the office of THE INDIA RUBBER WORLD, or post free on application to

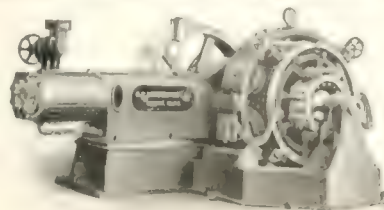
J. P. WILLIAM & BROTHERS,

Tropical Seed Merchants, HENERATGODA, CEYLON.

TELEGRAPHIC ADDRESS: WILLIAM, HENERATGODA, CEYLON.

## A STURTEVANT GENERATING SET

built in the Sturtevant Shops to the Sturtevant Standard



Engine has forced lubrication giving highest mechanical efficiency. All running parts enclosed, yet readily accessible. Water shed partition. No throwing of oil. Generator conservatively rated. Heavy overload capacity. Low temperature rise. Improved ventilation. Hard drawn copper segments. Bar wound armature.

In sizes from 3 to 250 H. W.

SEND FOR BULLETIN 63.

B. F. STURTEVANT CO., Boston, Mass.

General Office and Works: Hyde Park, Mass.

NEW YORK. PHILADELPHIA. CHICAGO. LONDON.

Designers and Builders of Heating, Ventilating, Drying and Mechanical Draft Apparatus; Fans, Blowers and Exhausters; Steam Engines, Electric Motors and Generating Sets; Fuel Economizers; Forges, Exhaust Heads, Steam Traps, etc.

42b

Mention The India Rubber World when you write.



THE MASON

## Reducing Valves

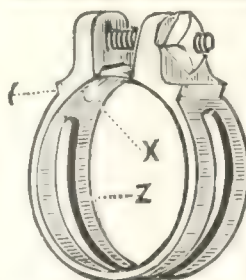
ARE THE WORLD'S STANDARD VALVES.

For automatically reducing and absolutely maintaining an even steam or air pressure

They are adapted for every need and guaranteed to work perfectly in every instance.

WRITE FOR FULL INFORMATION AND CATALOGUE

THE MASON REGULATOR CO. Boston, Mass., U.S.A.



## Yerdon's Improved Double Hose Band....

SIMPLE, STRONG, SURE.

Send for Sample and Prices.

WILLIAM YERDON, - Fort Plain, N. Y.

Mention The India Rubber World when you write

BOUND YEARLY VOLUMES OF  
THE INDIA RUBBER WORLD  
FOR SALE AT THIS OFFICE.  
PRICE \$5 EACH, PREPAID.



# HIDALGO

**A RUBBER AND COFFEE INVESTMENT  
PAYING SIX PER CENT. INTEREST  
ON INSTALLMENT AND CASH SHARES**

This Company is under the same management which has made  
*La Zacualpa Rubber Plantation* an acknowledged success.

FOR PARTICULARS AND PRINTED MATTER ADDRESS

**HIDALGO PLANTATION AND COMMERCIAL COMPANY**

713 MARKET STREET, SAN FRANCISCO, CALIFORNIA

*Mention The India Rubber World when you write.*

## THE MEXICAN MUTUAL PLANTERS COMPANY

Invites attention to the following facts relating to the  
planting on its plantation "La Junta," of 5554 acres,  
in the Trinidad Valley, Isthmus of Tehuantepec.

RUBBER.		COFFEE.		CACAO.	
	Acres.		Acres.		Acres.
4 years old, - - - -	455.26	4 years old, - - - -	29.64	5 years old, - - - -	7.5
3 years - - - - -	390.09	1 year - - - - -	285.77	2 years - - - - -	36.
2 years - - - - -	380.49		315.41	1 year - - - - -	83.29
1 year - - - - -	851.58	Contracted, 1905,	142.		126.79
	2078.32		457.41	Contracted, 1905,	100.
Contracted, 1905,	741.	Approximately 450,000 trees.			226.79
	2819.32			Approximately 40,000 trees.	
Approximately 2,000,000 Trees.		Cleared and planted to tame grasses for cattle and horses, 1190 Acres.			

WE began our planting in 1900 and complete it in 1905, making, we believe, the largest planting of cultivated rubber in the world.

We have not paid dividends—the trees must grow first.

We expect to pay a dividend in 1907. From that time we believe they will increase rapidly and afford returns that will amply justify and reward the faith and patience of our investors.

**DIVIDENDS WILL BE PAID ONLY WHEN EARNED.**

We have a few of our plantation bonds for sale, and will be pleased to furnish full information to those interested.

Address: **MEXICAN MUTUAL PLANTERS COMPANY,**  
910 Journal Building, CHICAGO, ILLINOIS.

ESTABLISHED 1848.

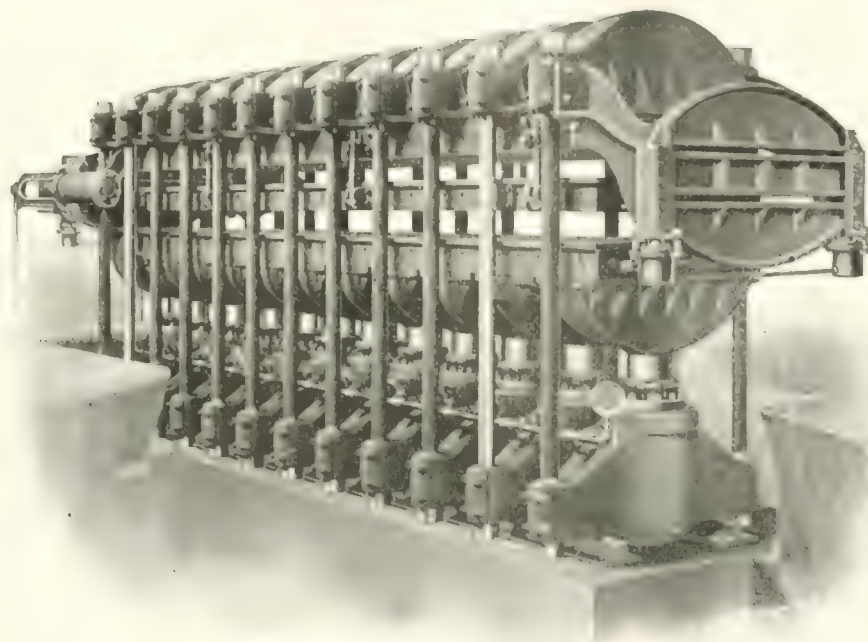
# Farrel Foundry and Machine Co.,

Largest Manufacturers in the World of \_\_\_\_\_

# Rubber Machinery.

FRANKLIN FARREL, PRES.  
CHARLES F. BLISS, TREAS  
FRANK E. HODLEY, SEC

ANSONIA, CONN., U. S. A.



STANDARD THREE-PLATEN BELT PRESS.  
BUILT WITH ANY SIZE AND NUMBER OF PLATENS

CALENDERS, GRINDERS, MIXERS, CRACKERS, WASHERS,  
WARMERS and REFINERS.

HYDRAULIC BELT PRESSES, with Hydraulic Stretchers,  
MULTIPLE, HEEL and SCREW PRESSES, PUMPS,  
ACCUMULATORS and FITTINGS.

---

LINOLEUM MACHINERY—Calenders, Grinders, Mixers, etc.  
Cabling, Winding, Spooling and Measuring Machines for Insulated Wire.  
Chilled Iron and Sand Rolls of all sizes, Steel and Wrought Iron Rolls.  
Shafting, Machine Moulded Gearing, Friction Clutches, etc.



BOSTON.

CHICAGO.

PHILADELPHIA.

**J. H. LANE & CO.,**

110 WORTH ST., NEW YORK.

**HOSE BELT SAIL WIDE DUCKS** **PAPER FELTS OUNCE GOODS ARMY DUCK OSNABURGS** **AUTOMOBILE AND BICYCLE** **TIRE FABRICS**

**SHEETINGS AND DRILLS. SEA ISLAND, EGYPTIAN, AND PEELER YARNS, AND FABRICS IN REGULAR AND SPECIAL CONSTRUCTION.**

*Mention The India Rubber World when you write.*

## Vacuum Drying Apparatus

FOR

Sheet and Reclaimed Rubber

EMIL PASSBURG SYSTEM

The Passburg (Patent) "VACUUM DRYING APPARATUS" is no experiment.

They are installed in all of the principal rubber manufactories of Europe.

200 chambers in daily operation drying rubber and rubber compounds.

Particulars upon application.

**JOSEPH P. DEVINE,**

314 Mooney-Brisbane Bldg.

BUFFALO, N. Y.

SOLE MANUFACTURING RIGHTS FOR AMERICA

Handwork is costly  
and inaccurate.

Anything that the hands can do  
can be done by Machinery.

No Problem is too Difficult for us.

Do you want a Machine for any  
Purpose in Rubber Work?

Write to us and we will Produce it

**WELLMAN SOLE CUTTING MACHINE CO.,**  
MEDFORD, MASSACHUSETTS.

A. M. STICKNEY, President.

EDWARD BROOKS, Treasurer.

*Mention The India Rubber World when you write.***NEW JERSEY RUBBER COMPANY,**

MANUFACTURERS OF ALL KINDS OF

**RECLAIMED \* RUBBER,**

Auxiliary Plant for Trimmings, daily Capacity of 20,000 Pounds. Total daily Capacity 45,000 Pounds.

Office and Factories, **LAMBERTVILLE, NEW JERSEY.**

*Mention The India Rubber World when you write.***BONNER MANUFACTURING CO.,**

MANUFACTURERS  
OF ALL GRADES

**RUBBER SUBSTITUTES.**

GOODS MADE TO ORDER A SPECIALTY.

OFFICE: No. 89 State Street,

BOSTON, MASS.

*Mention The India Rubber World when you write.*

# Publishers' Page *INDIA RUBBER WORLD*

OFFICES:

No. 150 NASSAU ST., NEW YORK

## A Directory That is Much in Demand.

TO THE INDIA RUBBER WORLD—*Gentlemen*: The writer would very much like to see a sample copy of your valuable magazine. I am especially interested in the advertising section.

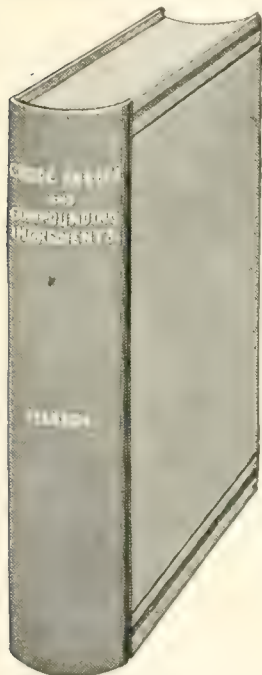
Awaiting your pleasure, yours truly,  
Portland, Oregon

WILLIAM WALKER.

THE above brief letter is noticed here, not because there is anything unusual about it, but because so many such letters reach this office. The Editor does not flatter himself that the contents of the reading pages alone attract those who look into THE INDIA RUBBER WORLD—there are too many evidences that the advertisements printed in the paper are of chief interest to numerous readers. The letter just quoted evidently is from a merchant who is thinking about taking on some line of rubber goods; he hears that there is a trade paper, but doesn't know the address; he knows the name, however, and his letter reaches this office. We hope that the paper sent will interest and prove of value to him; its advertising pages certainly will open to him a wide exposition of rubber products. These pages comprise the most complete directory in existence of the producers of rubber goods, and as a directory are in constant request from buyers—actual or prospective.

## A Book of Suggestions.

THE element of suggestiveness is something that no live manufacturer should neglect. Busy men are apt to become so engrossed with the details of daily routine that they find time for little else. They feel that if they could only employ an alert, vigorous mind to suggest, and suggest—good, bad, and indifferent, though the suggestions might be—some of them would be sure to be of value. Such help, however, is rare; indeed it is not in the market. The next best thing, therefore, is to put one's self in the way to do one's own suggesting. In "Crude Rubber and Compounding Ingredients" is found a record of the experiments, the successes, and failures of thousands of suggestions by the best rubber men of the world, and to read the book is to have them all, as it were, at one's elbow, saying: "Why don't you try this?" Or "My idea of the compound you want is thus and so." Or, "I use such an ingredient because it gives this result," and so on *ad infinitum*. It is well worth the price of the book to be able to summon such an array of experts from any part of the world at a moment's notice, and with no mileage costs or consultation fees.—Speaking of the



same book, a well known Rubber Superintendent recently said: "It has more meat in it than all of the other books and pamphlets combined. I use it constantly. It has been worth hundreds of dollars to me, it is so suggestive."

## A Sample Proves Satisfactory.

TO THE INDIA RUBBER WORLD—*Gentlemen*: We wish to thank you for the sample copy of THE INDIA RUBBER WORLD, as it proves satisfactory. Enclosed find Postoffice money order for \$3 for one year's subscription, to start with the May number. Respectfully yours,

Delphos, Ohio, June 14, 1905.

## How to Keep Up to Date on Rubber Planting.

IN reviewing a small work on rubber planting recently brought out in England, *The Electrician*, a leading London technical journal, remarks:

"With the present volume at hand the prospective planter will have a valuable aid in his work, and he will be well advised if he keeps himself up to date by perusing the issues of THE INDIA RUBBER WORLD, of New York, a journal in which rubber planting interests receive close and regular attention."

## A Word of Appreciation.

TO THE INDIA RUBBER WORLD—*Gentlemen*: We acknowledge with thanks your favor of the 30th, containing information as to the manufacturer of a special device in rubber about which we inquired. This only serves to illustrate the value of your medium, which we highly appreciate. Yours very truly,

THE OHIO RUBBER CO.

Cincinnati, Ohio.

## Back Number Wanted.

WE should appreciate it very much if any of our friends, having copies of THE INDIA RUBBER WORLD of January 1, 1904, which they do not intend filing, should favor us with the same. For copies in good condition we shall be pleased to pay 25 cents each, either in cash or in credits on subscription accounts.

## "Do Not Let Any Skip."

TO THE INDIA RUBBER WORLD—*Gentlemen*: I have deposited in the postoffice here, \$7, Mexican silver, to be paid to you in its value gold, in New York, in payment of bill enclosed. If it should be a little short, please let me know, and I will send the balance to you, but please do not let any numbers of THE WORLD skip, as I am always very interested in them. Very truly yours,

F. A. QUINBY.

Escuintla, Mexico.

## WANTED.

WANTED, \$7,000 to \$10,000 on first mortgage to rebuild and rehabilitate Rubber Manufacturing Plant near New York. (Plant recently destroyed by fire). Address CONGO, care of THE INDIA RUBBER WORLD. [797]

## FOR RENT.

FOUR Floors, 50x70 feet, in a nearly new brick factory building. Equipped with line shafting on each floor; Automatic Sprinklers throughout the building; Houser freight elevator; light, heat, and power furnished. For particulars write WILLIAM YERDON, Fort Plain, New York. [798]

## RUBBER FACTORY FOR SALE.

ONE 36"x6' new Vulcanizer with steel shell, hinged door, track and carriage; one 16"x40' Birmingham chilled roll Grinder, with square and stringer bed plates; one new frame and one new roll; balance of Mill has been used; all complete and in good condition; one knock screw steam plate Press 20"x20" with one extra steam plate; has been used. Machinery will set up and ready to run in a four story brick factory with lease for three years at \$60 per month, in town situated on the main line of Pennsylvania railroad and with water transportation to New York. Terms, cash, or owner will take interest in business to value of equipment. Address M. A. R., care of THE INDIA RUBBER WORLD. [799]

**BOUND VOLUMES OF  
THE INDIA RUBBER WORLD  
FOR SALE AT THIS OFFICE.**



# AITON MACHINE COMPANY

## ENGINEERS and MACHINISTS

CARDINER C. SIMS, President

THOMAS A. AITON, Vice President

ARTHUR S. BEVES, Secretary and Treasurer

126 LIBERTY STREET

NEW YORK

Factory: HARRISON, N. J.

Manufacturers of

## RUBBER MILL MACHINERY

## CALENDERS, WASHERS, ETC.

DRYING AND VULCANIZING APPARATUS.

Cabling and Insulating Machinery. Hydraulic Machines.

Builders of Heavy Machinery.

High Grade and Large Castings a Specialty.

INQUIRIES SOLICITED.

*Mention The India Rubber World when you write.*



J. SCHNURMANN,

RUBBER SCRAP,

Downham Mills, Chestnut Road, Tottenham, London, N., England.

WE SUPPLY MANUFACTURERS ALL OVER THE WORLD.

CORRESPONDENCE INVITED.

Cable Address, Reclaiming, London.  
A. B. C. Code Used.

L. J. WING MANUFACTURING CO.

136 LIBERTY ST., NEW YORK.

Manufacturers of

Wing's Disc Fans, Exhausters, Blowers,  
Heaters, Electric Motors, High Speed  
Engines, Marine and Stationary  
Gas Engines, Acetylene  
Generators, etc.

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### NAVIGATION OF THE AMAZON.

TO THE EDITOR OF THE INDIA RUBBER WORLD: The directors of the Amazon Steam Navigation Co., Limited, will recommend to the shareholders at the annual meeting to be held on the 29th inst. the payment of a final dividend of 3 per cent. (7s. 6d. per share) in respect of the second half of the year 1904, making 5 per cent. for the year.

G. STREET & CO., LIMITED.

*Continued, E. C., London, June 1, 1905.*

GUTTA-PERCHA SUBSTITUTE.—Certain so called Gutta-percha substitute imported at New York and classified by the collector of customs as a manufacture of Gutta-percha by similitude was claimed by the importer to be dutiable at a lower rate, as an unenumerated manufactured article. The evidence before the board of general appraisers showed the article to consist of artificial Gutta-percha—made from Gutta-percha, waxes, and rosins—and that it is used exactly for the same purposes as Gutta-percha in insulating wires and cables. The classification made by the collector was affirmed.

## Small Advertisement Department.

### SITUATIONS WANTED.

**HARD RUBBER** man of 24 years' experience is open for a position. Have many compounds, can handle article from the raw material to the finished product; compounding, mill work, vulcanizing, calendering, etc.; can grind rubber, polish, mould, and press; an expert turner; also make Electric Tapes, insulated wires; thorough mechanic on rubber machinery, setting up, etc. Address B. C. A., care of THE INDIA RUBBER WORLD. [790]

**PRACTICAL RUBBER EXPERT** and **DEMONSTRATOR**, direct from the laboratory of a large mechanical goods factory, wants position as Superintendent with reliable firm; 30 years' practical experience in everything made of Rubber. Address ARTHUR C. SQUIRES, Rubber Expert, Akron, Ohio. [791]

**PRACTICAL SUPERINTENDENT**.—Position wanted as Superintendent with reliable firm in the Mechanical line, where honest effort and a disposition to hustle and attain best results will be appreciated; 20 years' experience in all branches. Address EXECUTIVE, care of THE INDIA RUBBER WORLD. [790]

**SUPERINTENDENT** who has had nearly 20 years' experience in the Mechanical and Reclaiming business will act as Consulting Superintendent. If you want recipes of any kind, or want to match other makes of goods, want to reduce the cost of the goods you are now making, or are having trouble with any of your stocks, write me confidentially. Address B. C. O., care of THE INDIA RUBBER WORLD. [749]

**SUPERINTENDENT or MANAGER**.—Position wanted as Superintendent or Manager by young man who has had several years' experience in the manufacturing of Mechanical and Druggists' Rubber Goods. Have a practical knowledge of the compounding and manufacture of all kinds of goods, as well as the formulas and costs. Will accept position in United States, Canada, or Europe. Address C. J., care of THE INDIA RUBBER WORLD. [801]

**YOUNG MAN** with 9 years' experience desires to make connection with some manufacturing concern. Experience has been chiefly in the Press Department and on Tires of all description. Capable of taking charge, well acquainted with the processes in the manufacturing of Rubber, and have numerous formulas for compounding. Address, R. O. N., care of THE INDIA RUBBER WORLD. [792]

### SITUATIONS OPEN.

**CALENDER**.—A position is open to a good man experienced in Calender work of a Rubber Mill, using best grades of compounds. To right party steady employment and good wages. All correspondence confidential. Address RUBBER, No. 126 Liberty street, New York [803]

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**WANTED**.—Man experienced in handling and molding Hard Rubber work, both blown and solid. Address Box 48, Boston, Mass. [802]

**WANTED**.—A Calender Man wanted capable of running all kinds of Tire stocks and Mechanical goods. Good position for the right man. State wages expected, and full details as to experience, qualification, etc., etc. Also a good Mill Man wanted. Address C. A. N., care of THE INDIA RUBBER WORLD. [789]

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**FOR SALE**.—A full set of Carriage Tire Molds, cheap. If interested address P. R., care of THE INDIA RUBBER WORLD. [794]

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Davol Rubber Co., Providence, R. I.  
Empire Rubber Mfg. Co., Trenton, N. J.  
Home Rubber Co., Trenton, N. J.  
Manhattan Rubber Mfg. Co., New York.  
N. J. Car Spring & Rubber Co., Jersey City, N. J.  
New York Belting & Packing Co., N. Y.  
Peerless Rubber Mfg. Co., New York.  
Republic Rubber Co., Youngstown, O.  
Revere Rubber Co., Boston-New York.  
Voorhees Rubber Mfg. Co., Jersey City.

## MECHANICAL GOODS.

**Deckle Straps.**  
Boston Belting Co., Boston.  
Liverpool Rubber Co., Liverpool, Eng.  
Mechanical Rubber Co., Chicago.  
New York Belting & Packing Co., N. Y.  
Republic Rubber Co., Youngstown, O.  
Revere Rubber Co., Boston-New York.  
**"Dods" Packing.**  
Bowers Rubber Co., San Francisco, Cal.  
**Door Springs.**  
Hodgman Rubber Co., New York.  
**Dredging Sleeves.**  
Boston Belting Co., Boston-New York.  
Boston Woven Hose & Rubber Co.  
B. F. Goodrich Co., Akron, O.  
Home Rubber Co., Trenton, N. J.  
N. J. Car Spring & Rubber Co., Jersey City.  
Republic Rubber Co., Youngstown, O.  
**Fleshing Bands.**  
Republic Rubber Co., Youngstown, O.  
**Force Cups.**  
Hodgman Rubber Co., New York.  
**"Forsyth" Combination Packing.**  
Boston Belting Co., Boston-New York.  
**Fruit Jar Rings.**  
Boston Woven Hose & Rubber Co.  
Canadian Rubber Co. of Montreal.  
Cleveland Rubber Co., Cleveland, O.  
B. F. Goodrich Co., Akron, O.  
Empire Rubber Mfg. Co., Trenton, N. J.  
Eureka Rubber Mfg. Co. of Trenton.  
Manhattan Rubber Mfg. Co., New York.  
Republic Rubber Co., Youngstown, Ohio.  
New York Belting & Packing Co., N. Y.  
**Fuller Balls.**  
B. F. Goodrich Co., Akron, O.  
N. J. Car Spring & Rubber Co., Jersey City.



## RUBBER BUYERS' DIRECTORY—CONTINUED.

## MECHANICAL GOODS.

## Fuller Balls—Continued.

Peerless Rubber Mfg. Co., New York.  
Republic Rubber Co., Youngstown, O.

## Gage Glass Washers.

Boston Belting Co., Boston, Mass.  
Canadian Rubber Co., Montreal.  
Cleveland Rubber Co., Cleveland, O.  
Empire Rubber Mfg. Co., Trenton, N. J.  
Home Rubber Co., Trenton, N. J.  
Liverpool Rubber Co., Liverpool, Eng.  
Manhattan Rubber Mfg. Co., New York.  
Mechanical Rubber Co., Chicago, Ill.  
N. J. Car Spring & Rubber Co., Jersey City, N. J.  
New York Belting & Packing Co., N. Y.  
New York Rubber Co., New York.  
Revere Rubber Co., Boston, Mass.  
Jos. Stokes Rubber Co., Trenton, N. J.  
Voorhees Rubber Mfg. Co., Jersey City, N. J.

## Gas-Bags (Rubber).

Canadian Rubber Co. of Montreal.  
Cleveland Rubber Co., Cleveland, O.  
Daval Rubber Co., Providence, R. I.  
B. F. Goodrich Co., Akron, O.  
Liverpool Rubber Co., Liverpool, Eng.  
N. J. Car Spring & Rubber Co., Jersey City, N. J.  
Peerless Rubber Mfg. Co., New York.  
Tyer Rubber Co., Andover, Mass.  
Voorhees Rubber Mfg. Co., Jersey City.

## Gasket Tubing.

Canadian Rubber Co. of Montreal.  
Jenkins Bros., New York.

## Hat Bags.

Boston Belting Co., Boston.  
Canadian Rubber Co. of Montreal.  
Home Rubber Co., Trenton, N. J.  
Manhattan Rubber Mfg. Co., New York.  
Mechanical Rubber Co., Chicago.  
N. J. Car Spring & Rubber Co., Jersey City, N. J.  
New York Belting & Packing Co., N. Y.  
New York Rubber Co., New York.  
Peerless Rubber Mfg. Co., New York.  
Republic Rubber Co., Youngstown, O.  
Revere Rubber Co., Boston.

## Horse Shoe Pads.

Canadian Rubber Co. of Montreal.  
Home Rubber Co., Trenton, N. J.  
Peerless Rubber Mfg. Co., New York.  
Plymouth Rubber Co., Stoughton, Mass.  
Revere Rubber Co., Boston-New York.  
Voorhees Rubber Mfg. Co., Jersey City.

## Hose—Armored.

## Hose—Wire Wound.

Boston Belting Co., Boston-New York.  
Boston Woven Hose & Rubber Co.  
Canadian Rubber Co. of Montreal.  
B. F. Goodrich Co., Akron, O.  
N. J. Car Spring & Rubber Co., Jersey City.  
Peerless Rubber Mfg. Co., New York.  
Republic Rubber Co., Youngstown, O.  
Revere Rubber Co., Boston-New York.  
Voorhees Rubber Mfg. Co., Jersey City.

## Hose Couplings and Fittings.

Boston Woven Hose & Rubber Co.  
Canadian Rubber Co. of Montreal.

## Hose Linings.

Boston Belting Co., Boston-New York.  
Boston Woven Hose & Rubber Co.  
Empire Rubber Mfg. Co., Trenton, N. J.  
Eureka Rubber Mfg. Co., Trenton, N. J.  
N. J. Car Spring & Rubber Co., Jersey City, N. J.  
Peerless Rubber Mfg. Co., New York.

## Hose—Protected.

Boston Belting Co., Boston-New York.  
Revere Rubber Co., Boston-New York.  
Voorhees Rubber Mfg. Co., Jersey City.

## Hose Racks and Reels.

Wart & Knox Mfg. Co., Philadelphia.

## Hose—Rubber Lined.

## COTTON AND LINES.

Boston Belting Co., Boston-New York.  
Boston Woven Hose & Rubber Co.

## MECHANICAL GOODS.

## Hose—Rubber Lined. Continued.

## COTTON AND LINES.

Canadian Rubber Co. of Montreal.  
Cleveland Rubber Co., Cleveland, O.  
Empire Rubber Mfg. Co., Trenton, N. J.  
Eureka Fire Hose Co., New York.  
Eureka Rubber Mfg. Co. of Trenton.  
B. F. Goodrich Co., Akron, O.  
Gutta Percha & Rubber Mfg. Co., N. Y.  
Gutta Percha and Rubber Mfg. Co. of Toronto.  
Home Rubber Co., Trenton, N. J.  
Manhattan Rubber Mfg. Co., New York.  
N. J. Car Spring & Rubber Co., Jersey City, N. J.  
New York Belting & Packing Co., N. Y.  
Peerless Rubber Mfg. Co., New York.  
Republic Rubber Co., Youngstown, O.  
Revere Rubber Co., Boston.  
Jos. Stokes Rubber Co., Trenton, N. J.  
Voorhees Rubber Mfg. Co., Jersey City.

## Hose—Submarine.

Boston Belting Co., Boston-New York.  
B. F. Goodrich Co., Akron, O.  
Republic Rubber Co., Youngstown, O.

## "Jenkins '96" Packing.

Jenkins Bros., New York.

## Lawn Sprinklers.

Boston Woven Hose & Rubber Co.  
Canadian Rubber Co. of Montreal.

## Mallets (Rubber).

Boston Belting Co., Boston-New York.  
B. F. Goodrich Co., Akron, O.  
Peerless Rubber Mfg. Co., New York.  
Revere Rubber Co., Boston-New York.

## Mould Work.

## [See Mechanical Rubber Goods.]

Davidson Rubber Co., Boston.  
Daval Rubber Co., Providence, R. I.  
Faultless Rubber Co., Akron, O.  
Hardman Rubber Co., Belleville, N. J.  
Hodgman Rubber Co., New York.  
La Crosse (Wis.) Rubber Mills Co.  
Mattson Rubber Co., New York.  
Mitzel Rubber Co., Akron, O.  
National India Rubber Co., Bristol, R. I.  
Plymouth Rubber Co., Stoughton, Mass.  
Tyer Rubber Co., Andover, Mass.

## "Nubian" Packing.

Voorhees Rubber Mfg. Co., Jersey City.

## Oil Well Supplies.

Boston Belting Co., Boston-New York.  
Boston Woven Hose & Rubber Co.  
B. F. Goodrich Co., Akron, O.  
Home Rubber Co., Trenton, N. J.  
Lake Shore Rubber Co., Erie, Pa.  
N. J. Car Spring & Rubber Co., Jersey City.  
Peerless Rubber Mfg. Co., New York.  
Republic Rubber Co., Youngstown, O.  
Revere Rubber Co., Boston-Pittsburgh.  
Voorhees Rubber Mfg. Co., Jersey City.

## Paper Machine Rollers.

Boston Belting Co., Boston-New York.  
B. F. Goodrich Co., Akron, O.  
Republic Rubber Co., Youngstown, O.  
Revere Rubber Co., Boston-New York.  
Peerless Rubber Mfg. Co., New York.  
Voorhees Rubber Mfg. Co., Jersey City.

## "Perfection" Belting.

Boston Woven Hose & Rubber Co.

## Plumbers' Supplies.

Canadian Rubber Co. of Montreal.  
B. F. Goodrich Co., Akron, O.  
Republic Rubber Co., Youngstown, O.

## Pump Valves.

## [See Mechanical Rubber Goods.]

Jenkins Bros., New York.

## "Rainbow" Packing.

Peerless Rubber Mfg. Co., New York.

## Rings.

Boston Belting Co., Boston-New York.  
B. F. Goodrich Co., Akron, O.  
Peerless Rubber Mfg. Co., New York.  
Plymouth Rubber Co., Stoughton, Mass.  
Republic Rubber Co., Youngstown, O.

## MECHANICAL GOODS.

## Rollers—Rubber Covered.

Boston Belting Co., Boston.  
Canadian Rubber Co. of Montreal.  
Cleveland Rubber Co., Cleveland, O.  
Empire Rubber Mfg. Co., Trenton, N. J.  
Eureka Rubber Mfg. Co. of Trenton.  
B. F. Goodrich Co., Akron, O.  
Home Rubber Co., Trenton, N. J.  
Manhattan Rubber Mfg. Co., New York.  
Mechanical Rubber Co., Chicago.  
N. J. Car Spring & Rubber Co., Jersey City, N. J.  
New York Belting & Packing Co., N. Y.  
Peerless Rubber Mfg. Co., New York.  
Plymouth Rubber Co., Stoughton, Mass.  
Republic Rubber Co., Youngstown, O.  
Revere Rubber Co., Boston-New York.

## Sewing Machine Rubbers.

B. F. Goodrich Co., Akron, O.

## Springs—Rubber.

Boston Belting Co., Boston-New York.  
Canadian Rubber Co. of Montreal.  
B. F. Goodrich Co., Akron, O.  
Hardman Rubber Co., Belleville, N. J.  
Liverpool Rubber Co., Liverpool, Eng.  
N. J. Car Spring & Rubber Co., Jersey City.  
Peerless Rubber Mfg. Co., New York.  
Plymouth Rubber Co., Stoughton, Mass.  
Republic Rubber Co., Youngstown, O.  
Revere Rubber Co., Boston-New York.  
Voorhees Rubber Mfg. Co., Jersey City.

## Stair Treads.

Boston Belting Co., Boston-New York.  
Boston Woven Hose & Rubber Co.  
Canadian Rubber Co. of Montreal.  
Cleveland Rubber Co., Cleveland, O.  
Empire Rubber Mfg. Co., Trenton, N. J.  
Home Rubber Co., Trenton, N. J.  
Liverpool Rubber Co., Liverpool, Eng.  
Manhattan Rubber Mfg. Co., New York.  
N. J. Car Spring & Rubber Co., Jersey City, N. J.  
New York Belting & Packing Co., N. Y.  
New York Rubber Co., New York.  
Peerless Rubber Mfg. Co., New York.  
Republic Rubber Co., Youngstown, O.  
Revere Rubber Co., Boston-New York.  
Voorhees Rubber Mfg. Co., Jersey City.

## Thread.

Mechanical Fabric Co., Providence, R. I.  
Revere Rubber Co., Boston.

## Tiling.

Canadian Rubber Co. of Montreal, Ltd.  
B. F. Goodrich Co., Akron, O.  
Gutta Percha & Rubber Mfg. Co., N. Y.  
N. J. Car Spring & Rubber Co., Jersey City.  
New York Belting & Packing Co., N. Y.  
Peerless Rubber Mfg. Co., New York.  
Republic Rubber Co., Youngstown, Ohio.  
Voorhees Rubber Mfg. Co., Jersey City.

## Tires.

AUTOMOBILE, BICYCLE, AND CARRIAGE.  
Canadian Rubber Co. of Montreal, Ltd.  
Continental Caoutchouc & Guttapercha Co., Hanover.  
Empire Rubber Mfg. Co., Trenton, N. J.  
B. F. Goodrich Co., Akron, O.  
Gutta Percha & Rubber Mfg. Co., Toronto.  
Kokomo Rubber Co., Kokomo, Ind.  
Lake Shore Rubber Co., Erie, Pa.  
Liverpool Rubber Co., Liverpool, Eng.  
North British Rubber Co., Ltd., Edinburgh.  
Plymouth Rubber Co., Stoughton, Mass.  
Republic Rubber Co., Youngstown, O.  
AUTOMOBILE AND CARRIAGE.  
Boston Belting Co., Boston-New York.  
Eureka Rubber Mfg. Co., Trenton, N. J.  
Michelin Tire American Agency, N. Y.  
Revere Rubber Co., Boston-New York.  
Springfield Tire & Rubber Co., Springfield, Ohio.

## Truck Bands.

Boston Belting Co., Boston.  
Cleveland Rubber Co., Cleveland, O.  
Empire Rubber Mfg. Co., Trenton, N. J.  
B. F. Goodrich Co., Akron, O.  
Home Rubber Co., Trenton, N. J.  
Manhattan Rubber Mfg. Co., New York.  
Mechanical Rubber Co., Chicago.  
N. J. Car Spring & Rubber Co., Jersey City, N. J.

## MECHANICAL GOODS.

## Truck Bands—Continued.

New York Belting & Packing Co., N. Y.  
Peerless Rubber Mfg. Co., New York.  
Republic Rubber Co., Youngstown, O.  
Voorhees Rubber Mfg. Co., Jersey City.

## Tubing.

## [See Mechanical Rubber Goods.]

American Hard Rubber Co., New York.  
Davidson Rubber Co., Boston.  
Daval Rubber Co., Providence, R. I.  
Hardman Rubber Co., Belleville, N. J.  
Plymouth Rubber Co., Stoughton, Mass.  
Tyer Rubber Co., Andover, Mass.

## Tubing (Beer).

Boston Belting Co., Boston-New York.  
Boston Woven Hose & Rubber Co.  
Canadian Rubber Co. of Montreal.  
Faultless Rubber Co., Akron, Ohio.  
B. F. Goodrich Co., Akron, O.  
Peerless Rubber Mfg. Co., New York.  
Plymouth Rubber Co., Stoughton, Mass.  
Republic Rubber Co., Youngstown, O.  
Voorhees Rubber Mfg. Co., Jersey City.

## "Usudurian" Packing.

Revere Rubber Co., Boston-New York.

## Valve Balls.

Boston Belting Co., Boston.  
Cleveland Rubber Co., Cleveland, O.  
Manhattan Rubber Mfg. Co., New York.  
Mechanical Rubber Co., Chicago.  
New York Belting & Packing Co., N. Y.  
New York Rubber Co., New York.  
Peerless Rubber Mfg. Co., New York.  
Republic Rubber Co., Youngstown, O.

## Valve Discs.

American Hard Rubber Co., New York.  
Boston Belting Co., Boston-New York.  
B. F. Goodrich Co., Akron, O.  
Peerless Rubber Mfg. Co., New York.  
Republic Rubber Co., Youngstown, O.  
Revere Rubber Co., Boston-New York.

## Valves.

## [See Mechanical Rubber Goods.]

Jenkins Bros., New York-Chicago.  
Plymouth Rubber Co., Stoughton, Mass.

## Wringer Rolls.

Canadian Rubber Co. of Montreal.  
Cleveland Rubber Co., Cleveland, O.  
B. F. Goodrich Co., Akron, O.  
Home Rubber Co., Trenton, N. J.  
Republic Rubber Co., Youngstown, O.

## DRUGGISTS' AND STATIONERS' SUNDRIES

## Atomizers.

## Bandages.

## Bulbs.

## Syringes.

## Water Bottles.

## Druggists' Sundries—General.

American Hard Rubber Co., New York.  
C. J. Bailey & Co., Boston.  
Geo. Borgfeldt & Co., New York.  
Boston Woven Hose & Rubber Co.  
Canadian Rubber Co. of Montreal.  
Cleveland Rubber Co., Cleveland, O.  
Davidson Rubber Co., Boston.  
Daval Rubber Co., Providence, R. I.  
Faultless Rubber Co., Akron, O.  
B. F. Goodrich Co., Akron, O.  
Hanover Rubber Co., Hanover, Germany.  
Hardman Rubber Co., Belleville, N. J.  
Hodgman Rubber Co., New York.  
Mitzel Rubber Co., Akron, O.  
North British Rubber Co., Ltd., Edinburgh.  
Tyer Rubber Co., Andover, Mass.

## Balls, Dolls and Toys.

Geo. Borgfeldt & Co., New York.  
Canadian Rubber Co. of Montreal.  
Continental Caoutchouc & Guttapercha Co.  
B. F. Goodrich Co., Akron, O.  
Hanover Rubber Co., Hanover, Germany.  
New York Rubber Co., New York.



## RUBBER BUYERS' DIRECTORY—CONTINUED.

## DRUGGISTS' SUNDRIES

## Combs.

American Hard Rubber Co., New York  
Geo. Borgfeldt & Co., New York  
Hanover Rubber Co., Hanover, Germany.

## Elastic Bands.

Canadian Rubber Co. of Montreal.  
Davidson Rubber Co., Boston.  
Davol Rubber Co., Providence, R. I.  
B. F. Goodrich Co., Akron, O.  
Hodgman Rubber Co., New York-Boston.  
Tyer Rubber Co., Andover, Mass.

## Erasive Rubbers.

Davidson Rubber Co., Boston.  
B. F. Goodrich Co., Akron, O.  
Hardman Rubber Co., Belleville, N. J.  
Mattson Rubber Co., New York.

## Finger Cots.

Faultless Rubber Mfg. Co., Akron, O.  
B. F. Goodrich Co., Akron, O.  
Pure Gum Specialty Co., Barberton, O.

## Gloves.

Canadian Rubber Co. of Montreal.  
Davol Rubber Co., Providence, R. I.  
Faultless Rubber Co., Akron, O.  
B. F. Goodrich Co., Akron, O.  
Pure Gum Specialty Co., Barberton, O.

## Hard Rubber Goods.

American Hard Rubber Co., New York.  
Geo. Borgfeldt & Co., New York.  
Canadian Rubber Co. of Montreal.  
Davol Rubber Co., Providence, R. I.  
Hanover Rubber Co., Hanover, Germany.  
Hardman Rubber Co., Belleville, N. J.  
Stokes Rubber Co., Joseph, Trenton, N. J.  
Tyer Rubber Co., Andover, Mass.

## Hospital Sheetings.

Cleveland Rubber Co., Cleveland, O.  
Davidson Rubber Co., Boston.  
Davol Rubber Co., Providence, R. I.  
Hodgman Rubber Co., New York.  
Plymouth Rubber Co., Stoughton, Mass.  
Tyer Rubber Co., Andover, Mass.

## Hot Water Bottles.

[See Water Bottles.]

## Ice Bags and Ice Caps.

Faultless Rubber Co., Akron, Ohio.  
B. F. Goodrich Co., Akron, O.  
Hardman Rubber Co., Belleville, N. J.  
Pure Gum Specialty Co., Barberton, O.  
Tyer Rubber Co., Andover, Mass.

## Life Preservers.

Hodgman Rubber Co., New York.

## Nipples.

Canadian Rubber Co. of Montreal.  
Cleveland Rubber Co., Cleveland, O.  
Davidson Rubber Co., Boston.  
Davol Rubber Co., Providence, R. I.  
Faultless Rubber Co., Akron, O.  
B. F. Goodrich Co., Akron, O.  
Pure Gum Specialty Co., Barberton, O.  
Tyer Rubber Co., Andover, Mass.

## Sponges (Rubber).

Faultless Rubber Co., Ashland, Ohio.  
B. F. Goodrich Co., Akron, O.

## Stationers' Sundries.

American Hard Rubber Co., New York.  
Geo. Borgfeldt & Co., New York.  
Boston Woven Hose & Rubber Co.  
Canadian Rubber Co. of Montreal.  
Cleveland Rubber Co., Cleveland, O.  
Davidson Rubber Co., Boston.  
Davol Rubber Co., Providence, R. I.  
B. F. Goodrich Co., Akron, O.  
Hanover Rubber Co., Hanover, Germany.  
Hardman Rubber Co., Belleville, N. J.  
Hodgman Rubber Co., New York-Boston.  
Tyer Rubber Co., Andover, Mass.

## Stopples (Rubber).

Cleveland Rubber Co., Cleveland, O.  
Davol Rubber Co., Providence, R. I.  
Hodgman Rubber Co., New York.  
Manhattan Rubber Mfg. Co., New York.  
New York Belting & Packing Co., N. Y.  
Tyer Rubber Co., Andover, Mass.

## DRUGGISTS' SUNDRIES.

## Throat Bags.

Cleveland Rubber Co., Cleveland, O.  
Davol Rubber Co., Providence, R. I.  
B. F. Goodrich Co., Akron, O.  
Tyer Rubber Co., Andover, Mass.

## Tobacco Pouches.

Canadian Rubber Co. of Montreal.  
Faultless Rubber Co., Akron, Ohio.  
B. F. Goodrich Co., Akron, O.  
Pure Gum Specialty Co., Barberton, O.  
Tyer Rubber Co., Andover, Mass.

MACKINTOSHED  
AND SURFACE  
GOODS

## Air Goods (Rubber).

Canadian Rubber Co. of Montreal.  
Cleveland Rubber Co., Cleveland, O.  
Davol Rubber Co., Providence, R. I.  
B. F. Goodrich Co., Akron, O.  
Hodgman Rubber Co., New York.  
New York Rubber Co., New York.  
National India Rubber Co., Providence.  
Tyer Rubber Co., Andover, Mass.

## Air Mattresses.

Canadian Rubber Co. of Montreal.  
Mechanical Fabric Co., Providence, R. I.

## Barbers' Bibs.

Davol Rubber Co., Providence, R. I.  
Tyer Rubber Co., Andover, Mass.

## Bathing Caps.

Davol Rubber Co., Providence, R. I.  
B. F. Goodrich Co., Akron, O.

## Bellows Cloths.

Boston Rubber Co., Boston.  
Cleveland Rubber Co., Cleveland, O.  
Hodgman Rubber Co., New York.  
La Crosse (Wis.) Rubber Mills Co.

## Calendering.

La Crosse (Wis.) Rubber Mills Co.  
Plymouth Rubber Co., Stoughton, Mass.

## Carriage Ducks and Drills.

Cleveland Rubber Co., Cleveland, O.  
Empire Rubber Mfg. Co., Trenton, N. J.  
Eureka Rubber Mfg. Co. of Trenton.  
Gutta Percha & Rubber Mfg. Co., Toronto.

## Clothing.

Canadian Rubber Co. of Montreal.  
Cleveland Rubber Co., Cleveland, O.  
Granby Rubber Co., Granby, Quebec.  
Gutta Percha & Rubber Mfg. Co. of Toronto.  
Hodgman Rubber Co., New York.  
La Crosse (Wis.) Rubber Mills Co.  
North British Rubber Co., Ltd., Edinburgh.

## Cravenette.

Cravenette Co., Ltd.

## Diving Dresses.

Hodgman Rubber Co., New York.

## Dress Shields.

Hodgman Rubber Co., New York.  
Mattson Rubber Co., New York.

## Horse Covers.

Hodgman Rubber Co., New York.

## Leggings.

Cleveland Rubber Co., Cleveland, O.  
Hodgman Rubber Co., New York.

## Mackintoshes.

[See Clothing.]

## Proofing.

Canadian Rubber Co. of Montreal.  
La Crosse (Wis.) Rubber Mills Co.  
Plymouth Rubber Co., Stoughton, Mass.

## MACKINTOSHED GOODS.

## Rain Coats.

Cravenette Co., Ltd.

## Rubber Coated Cloths.

Mechanical Fabric Co., Providence, R. I.

RUBBER  
FOOTWEAR

## Boots and Shoes.

American Rubber Co., Boston.  
Boston Rubber Shoe Co., Boston.  
Canadian Rubber Co. of Montreal.  
L. Candee & Co., New Haven, Ct.  
Granby Rubber Co., Granby, Quebec.  
Gutta Percha & Rubber Mfg. Co. of Toronto.  
Hood Rubber Co., Boston.  
Liverpool Rubber Co., Liverpool, Eng.  
Lycoming Rubber Co., Williamsport, Pa.  
Meyer Rubber Co., New York.  
National India Rubber Co., Boston.  
North British Rubber Co., Ltd., Edinburgh.  
United States Rubber Co., New York.  
Wales-Goodyear Rubber Co., Boston.  
Woonsocket Rubber Co., Providence.

## Heels and Soles.

Boston Woven Hose & Rubber Co.  
Canadian Rubber Co. of Montreal.  
Continental Caoutchouc & Guttapercha Co., Hanover.  
Plymouth Rubber Co., Stoughton, Mass.  
Springfield Tire & Rubber Co., Springfield, Ohio.

## Tennis Shoes.

American Rubber Co., Boston.  
Boston Rubber Shoe Co., Boston.  
Granby Rubber Co., Granby, Quebec.  
Liverpool Rubber Co., Liverpool, Eng.  
National India Rubber Co., Providence.  
United States Rubber Co., New York.

## Tennis Soles.

Canadian Rubber Co. of Montreal.  
Jos. Stokes Rubber Co., Trenton, N. J.

## Wading Pants.

Canadian Rubber Co. of Montreal.  
Hodgman Rubber Co., New York.

SPORTING  
GOODS

## Foot Balls.

Canadian Rubber Co. of Montreal.  
Cleveland Rubber Co., Cleveland, O.  
Faultless Rubber Co., Akron, Ohio.  
B. F. Goodrich Co., Akron, O.  
Hodgman Rubber Co., New York.

## Golf Balls.

Boston Belting Co., Boston.  
Canadian Rubber Co. of Montreal.  
Davidson Rubber Co., Boston.  
B. F. Goodrich Co., Akron, O.

## Submarine Outfits.

Hodgman Rubber Co., New York.

## Sporting Goods.

Canadian Rubber Co. of Montreal.  
Faultless Rubber Co., Akron, Ohio.  
B. F. Goodrich Co., Akron, O.  
Hodgman Rubber Co., New York.  
Tyer Rubber Co., Andover, Mass.

## Striking Bags.

Canadian Rubber Co. of Montreal.  
Faultless Rubber Co., Akron, Ohio.  
B. F. Goodrich Co., Akron, O.  
Pure Gum Specialty Co., Barberton, O.

DENTAL AND  
STAMP RUBBER

## Dental Gum.

American Hard Rubber Co., New York  
Cleveland Rubber Co., Cleveland, O.  
Tyer Rubber Co., Andover, Mass.

## BEST AND STAMP RUBBER

## Rubber Dam.

Cleveland Rubber Co., Cleveland, O.  
Davol Rubber Co., Providence, R. I.  
Hodgman Rubber Co., New York.  
Tyer Rubber Co., Andover, Mass.

## Stamp Gum.

Mattson Rubber Co., New York.  
Mechanical Rubber Co., Chicago, Ill.  
N. J. Car Spring & Rubber Co., Jersey City, N. J.  
New York Belting & Packing Co., N. Y.

## ELECTRICAL

## Electrical Supplies.

American Hard Rubber Co., New York  
Lake Shore Rubber Co., Erie, Pa.  
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Revere Rubber Co., Boston-New York.

## Hard Rubber Goods.

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Manhattan Rubber Mfg. Co., New York.  
N. J. Car Spring & Rubber Co., Jersey City, N. J.  
New York Belting & Packing Co., N. Y.

## Chemical Analyses.

Durand Woodman, Ph. D., New York.  
H. L. Terry, Manchester, England.

## Chemists.

Stephen P. Sharples, Boston, Mass.  
Durand Woodman, Ph. D., New York.

## Investments

Hidalgo Plantation and Commercial Co., San Francisco.  
Mexican Mutual Rubber Co., Chicago.

## Laboratory—Tests, Analyses.

G. E. Heyl-Dia, New York.

## Periodicals.

"Journal d'Agriculture Tropicale," Paris, France.  
"Le Caoutchouc & la Gutta Percha," Paris, France.  
"Tropical Agriculturist," Colombo, Ceylon.

## Rubber Lands For Sale.

O. H. Harrison, San Francisco.

## Rubber Planting.

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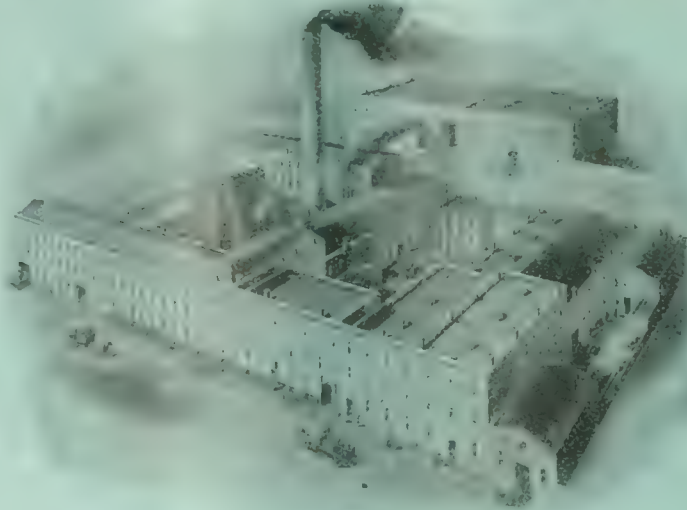


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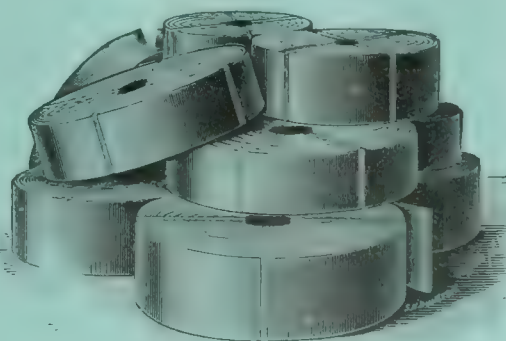
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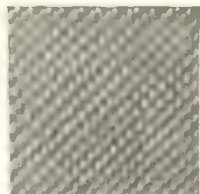
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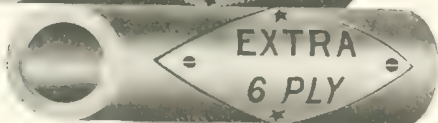
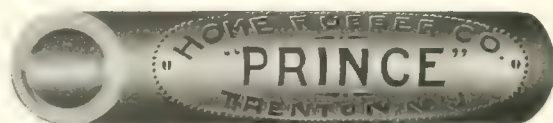
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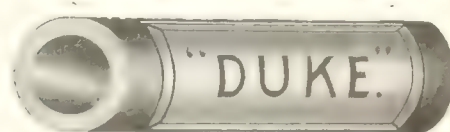


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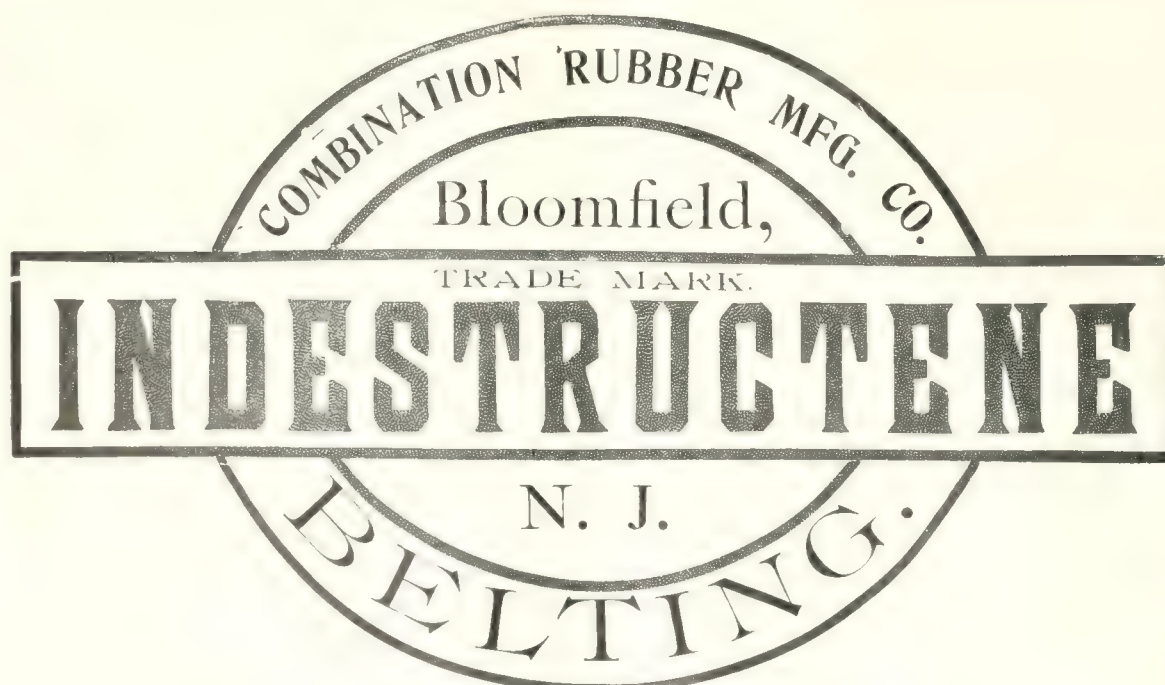
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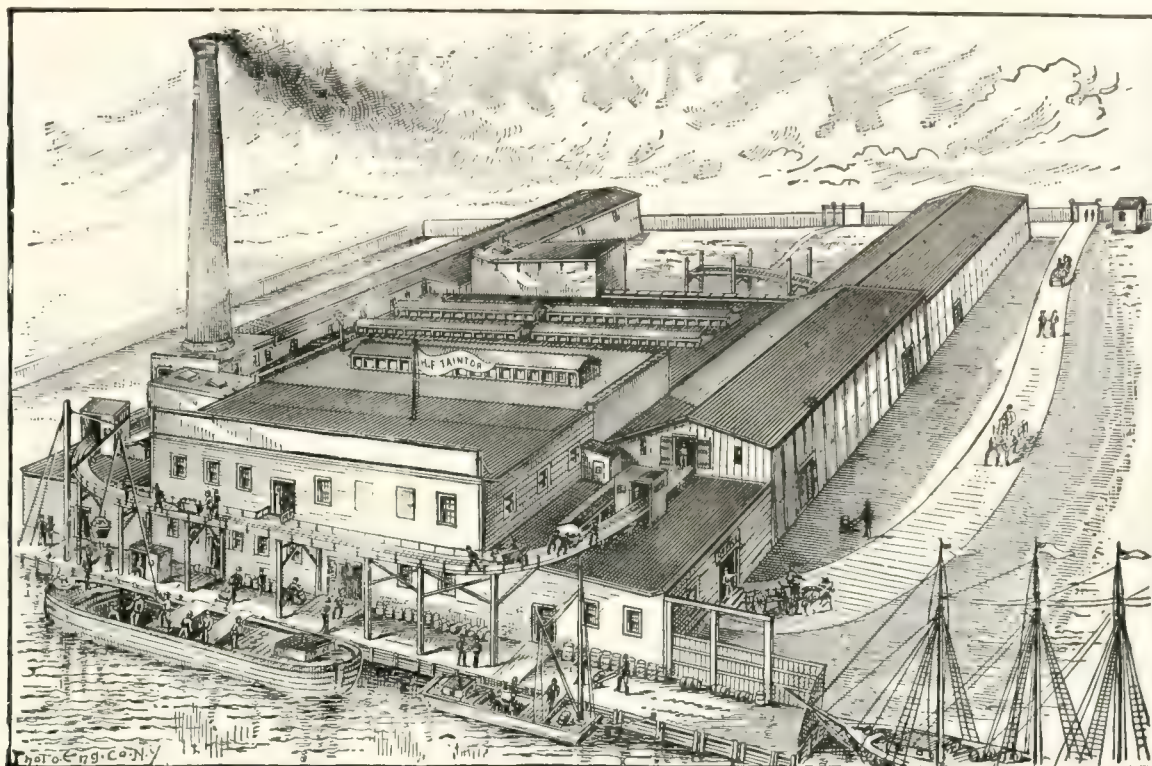
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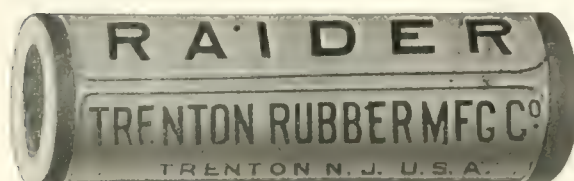
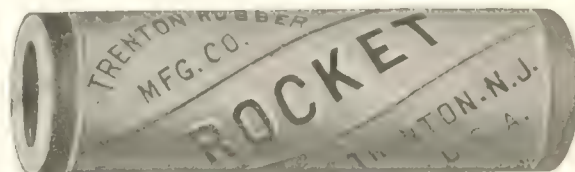
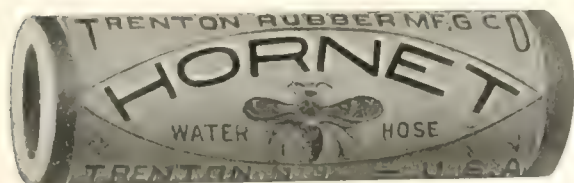
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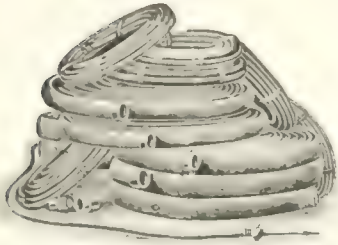
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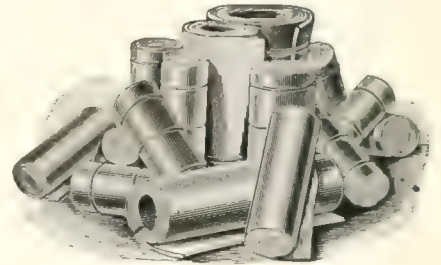
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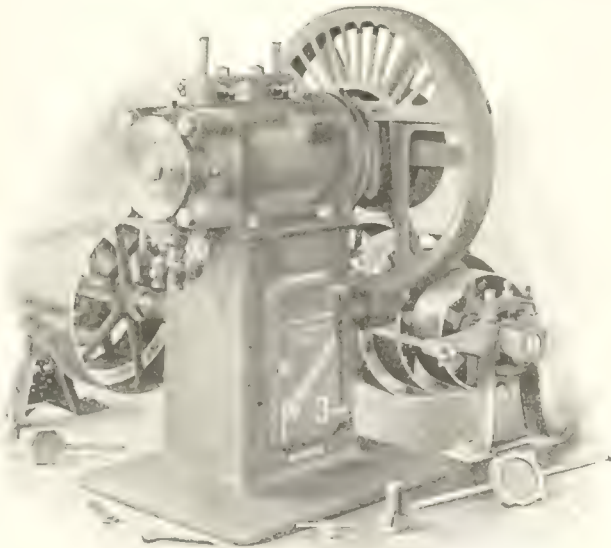
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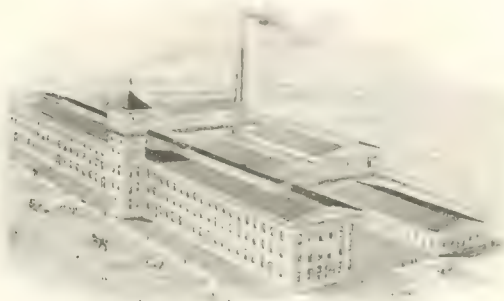


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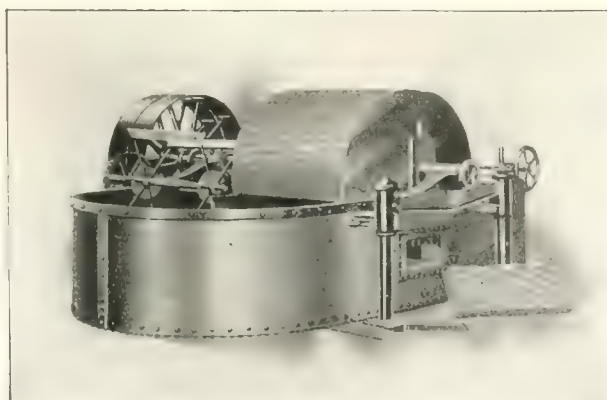
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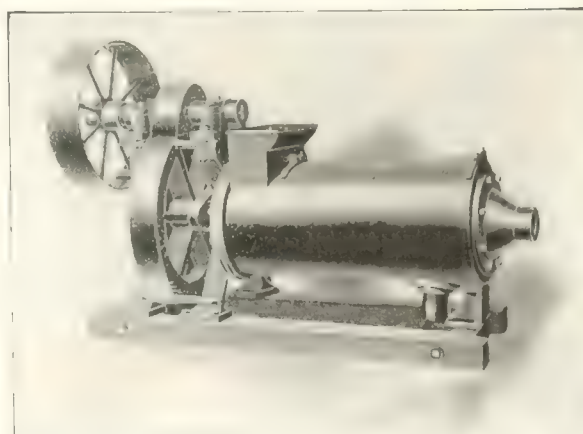
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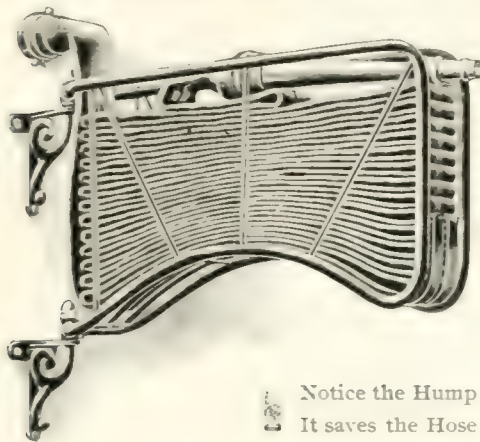
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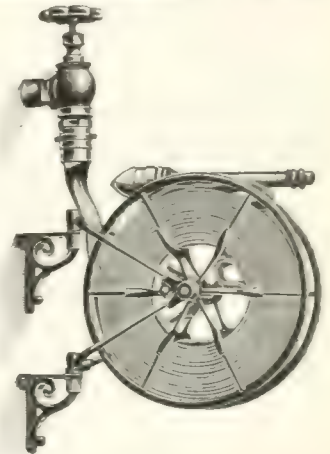
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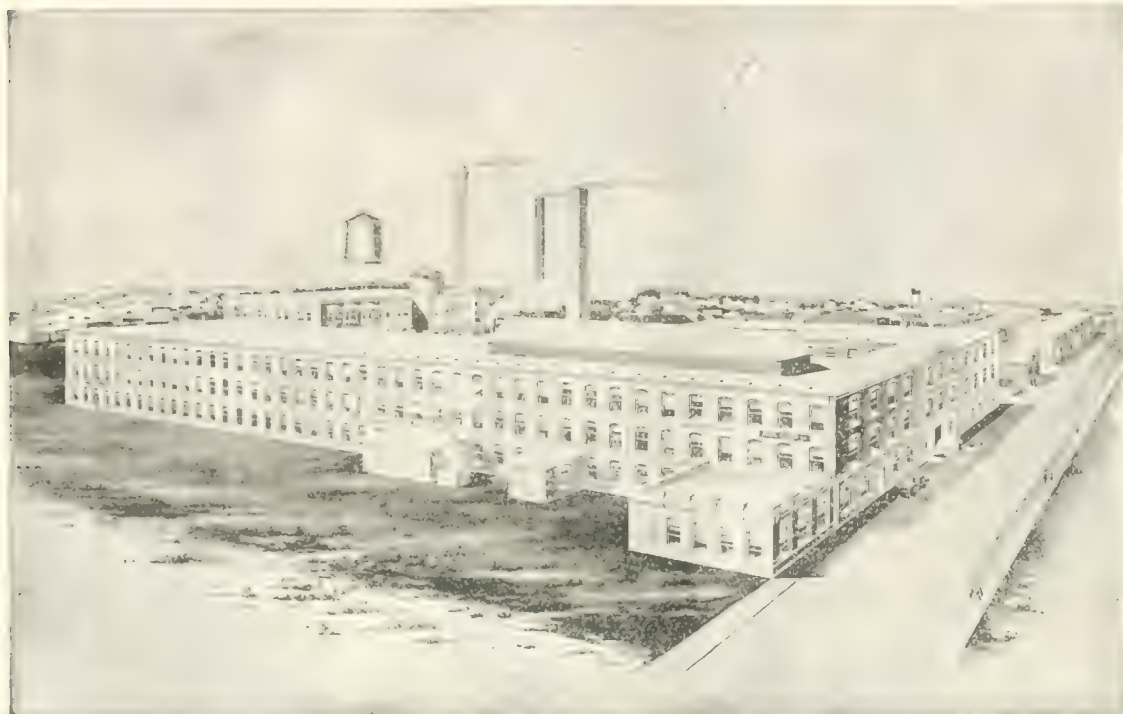
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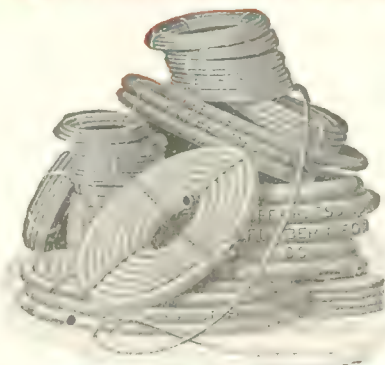
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HENRY C. PEARSON,  
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HAWTHORNE HILL,  
ASSOCIATE.

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## THE BLENDED RUBBER FROM PARÁ.

THE popular supposition, or more accurately, belief, that "Pará rubber," fine and coarse, is the product solely of trees of the *Hevea* species, is likely to receive a rude shock when the results of the investigations of Professor Henri Jumelle and Dr. Jacques Huber, discussed by Mr. Consul Aymé on another page this month, become better known.

The discovery that there may be and probably is but little really pure Pará rubber (that is, *Hevea* Pará), but that what the manufacturers have been receiving is made from the mixture of the *latices* of the *Heveas* and a *Sapium*, leads to many interesting speculations. The valuation of Amazonian rubber heretofore has been based very largely upon its dryness, but even then there were not wanting manufacturers to accept or reject certain lots because their experience had taught them that certain physical qualities point to difference in value for specific uses. There have been those, too, who have claimed that the introduction of *farinha* flour by the rubber gatherer has decidedly injured certain lots.

At the same time, in the face of any such adulteration as that just mentioned, and in spite of the fact that much of the Pará rubber now appears to be the product of a blend, that rubber stands to-day as the unit of value in crude rubber measurement. The question that naturally arises, therefore, is this: Does such a blend produce a better quality of rubber than if the product were wholly from the *Hevea Brasiliensis* or from the *Sapium acuparium*?

A careful reading of Dr. Huber's report leaves this point indeterminate, the evidence leaning, however, slightly in the direction of a conclusion that smoked rubber from the *Sapium* would show less tensile strength than smoked rubber from *Hevea*. Nor can any particular light be thrown on this interesting subject by the rubber gatherers themselves, who don't know and don't care to know about such differences, or by the white men employed in rubber houses up the Amazon, whose interests do not touch investigation of this sort.

In this connection, it is possible that the belief that the lack of tensile strength in the Pará rubber from the Far East comes from the immaturity of the trees or the method of coagulating may be misleading. It may be that the mixture of the *latex* of the *Sapium* with that *latex* would produce an exact replica of Amazonian Pará. Further than this, Dr. Huber's communication opens up a field for valuable experiment in the blending of the *latices* of the *Castilloa*, the *Ficus*, the *Manihot*, and many others that would undoubtedly produce interesting results and possibly new grades of rubber of varying values.

It must not be thought that it is only up the Amazon that the *latex* of various rubber producers is mixed. It is a well known fact that the *latices* of various kinds of *Landolphia* are mixed together by the natives, and that the product is not nearly as good as if they were coagulated separately. This, however, is because different kinds need different methods of coagulation, and it is probable that if the coagulation were done by a centrifugal, it would be as



good or even better than any one of the sorts coagulated by native methods. It is true that the *latex* of certain *Landolphia*s is worthless from the rubber standpoint, and that its incorporation with that of the valuable species tends to depreciate the value of the resulting product.

Taken as a business proposition, however, the blending of two or more kinds of *latex* by the irresponsible native gatherer is not to be encouraged, for it opens the door to further adulteration, and even if that were absent and the work done honestly, too much blundering and a decided lack of symmetry is the result. It would be infinitely better for the manufacturer to receive the rubber from each tree separately and do his own blending on the mixing mill.

It is to be hoped that experts the world over will appreciate the importance of Dr. Huber's discovery and that the *latex* of the *Sapium acuparium* will at once receive the attention that the *latices* of other rubber producers have received, and that above all we may know very soon the resin contents of the product of this interesting tree.

Incidentally this discovery contains in it a most important argument in favor of rubber cultivation, for who could for a moment imagine, if the Amazonian product had come from cultivated trees, that the planters could for years have been blending the *latex* of two different sorts in any proportion that suited a vagrant fancy, and neither the manufacturer of rubber goods, nor the student of the subject, be a particle the wiser.

#### "SIMILIA SIMILIBUS CURANTUR."

"LIKE cures like," the homeopaths say, but the text is very far from enthusiastic acceptance by the rubber trade. Particularly is it controverted in the brands on special goods, and when it comes to the naming of companies, instead of relieving local irritation it induces fever, restlessness and in extreme cases brings on fits—of anger. Looking backward an instance in point was the branding of "Boston Rubber Co." on rubber shoes, which greatly stirred the Boston Rubber Shoe Co., who had never been able to impress the word *shoe* upon the whole trade. Later came a mechanical concern that took the name "Akron India-Rubber Works" and at once, so it is said, gathered in much mail intended for The B. F. Goodrich Co., who for a long time operated the only "rubber works" in the city of Akron. And now comes a protest and a court decision concerning the names Eureka Fire Hose Co. and Eureka Rubber Manufacturing Co.

Without entering at all into the motives that may lead one concern to choose a name that may be confused with that of a competitor, or rather allowing that the similarity is wholly accidental, it would seem to be fair for those committing such unintentional trespass to rectify their mistake as soon as discovered. A good trade name is a valued possession, and its owner is naturally most jealous of its use. It is quite likely that very little actual harm comes from the one who appears to appropriate it. But it induces bitterness and often lawsuits that are far from friendly. Would it not be good business for those who

are charged with such trespass to select a new name, and say why they did it, and thus get a measure of advertising that otherwise would not have come their way? Of course, "business is business" and "war begets war," but it would seem as if there might be some easy way out of the confusion and suits that grow out of a similarity in firm naming.

THE COTTON CROP WILL BE SHORT this year, unless all signs fail. It is agreed that the acreage planted is below that of last year, and a bad condition of the crop is reported from many localities. Of course the extent of the yield cannot be forecasted with accuracy, but the rubber manufacturer will make a mistake who regards as a possibility a crop equal to last year's.

THE HOT WATER BOTTLE HAS BEEN "MENACED" in Europe much longer than in America by the bag heated with crystalline salts. It is interesting, therefore, to note that the parent company, after a bad year's business, regard it as a "fortunate occurrence" (*glückliches Ereignis*) that, after much effort, they were able to sell the American patents for \$40,000. They seem to have succeeded better in selling patents than in selling bags.

IT SHOULD ENCOURAGE RUBBER PLANTERS everywhere to note the development of the rubber manufacturing industry, as indicated by the recent increase of capital of many important concerns, reported elsewhere in this paper. These increases, it may be added, may be accepted as substantial, and not a mere addition to capital on paper; the public is not being asked to buy any shares.

THE SECRET OF MAKING RUBBER has been discovered again, this time by a surgeon and a chemist in Michigan, according to newspaper reports. "Success has been attained after five years of experimenting," the story reads. But the secret is not to be made public, because its discoverers are going to organize a company. But this may be for the general good—the field remains open for an unlimited number of others to discover the wonderful secret and organize companies, with a possibility of selling shares of stock even if they should never arrive at the point of having rubber to sell.

#### THE UBERO PLANTING COMPANIES.

THE report of the receivers for the *Ubero Plantation Co. of Boston*, filed in June, was mentioned in the last INDIA RUBBER WORLD (page 355). The receivers petitioned for authority (1) to sell the property involved and (2) to employ counsel for the purpose of bringing suit for the benefit of the corporation against any of its officers or other persons who may have failed in their duty toward investors in the company. An order of the United States court gave notice to all concerned to appear on July 20 to show cause why this petition should not be granted, and after a hearing on that date a decree was entered, authorizing the sale after 60 days and empowering the receivers forthwith to employ counsel and bring suit.

The same persons as receivers for the *Consolidated Ubero Plantations Co.* filed their report in the United States court at Boston on July 14. The character of the report is much the same as that of the first report filed, in that gross mismanagement is charged, and that the greater part of the money of the investors appears to have been diverted to improper uses. The amount of money shown by the books to have been received

from investors was \$713,285, and the expenditures \$710,998.69, of which only \$104,834.10 is charged to "plantation account." After reciting the juggling of the funds between various corporations formed by William D. Owen, the receivers say that there were "practically no other parties in interest in all this series of transactions than Mr. Owen, his family, and his friends." The receivers request that they be allowed to employ counsel to consider the advisability of taking legal proceedings for the benefit of the stockholders.

At a meeting of stockholders of the *Ubero Plantation Co. of Boston* (Boston, July 11) those present adopted the recommendations of a committee on reorganization previously appointed, and 21 persons entered their subscriptions for new stock, becoming responsible for about \$3000. At the hearing before the United States court on July 20, referred to above, counsel representing some of the investors urged a postponement of any order by the court for the reason that an attempt at reorganization was being made and that action by the court might have the effect of discouraging such reorganization.

Friends of William D. Owen during the month have disseminated reports from Indiana to the effect that Owen has been in Europe only in an effort to recover his health, and that for sometime past he has been at Bad Nauheim, Germany, in a prostrated condition and "wholly ignorant of the conditions that have arisen concerning his ambitious projects."

#### MAKING GUTTA-PERCHA FROM LEAVES.

THE following details regarding the *Nederlandsche Gutta-Percha Maatschappij* (Dutch Gutta-Percha Co.) are derived from *De Indische Mercur*:

The profit and loss account of the company for 1904 shows that after deducting various amounts, aggregating 18,596 guilders, for the sinking funds, the net profits for 1904 will reach 63,175 guilders [= \$25,396.35]. The balance of loss for the year ending December 31, 1903 amounting to 69,033 guilders, will consequently not be entirely covered, and the company's accounts on December 31, 1904, therefore show a loss of 5858 guilders. In their report, the directors state that they were greatly disappointed by the almost complete stagnation in the cable manufacturing industry, on which the Gutta-percha trade largely depends, the business of the company having seriously suffered in consequence. They say that if, during the second half of the year, the company had been able to sell an equal amount of Gutta-percha to that sold during the first half of 1904, the gross profits would undoubtedly have been large enough, not only to make important contributions to the sinking funds, in accordance with the provisions of the by laws, but likewise to leave a surplus to be divided among the stockholders as a dividend. The prospects for the current year cannot as yet be predicted with certainty. Should the cable industry revive, and should it become possible to find a larger outlet for the product in other branches of industry than has heretofore been obtained, there need be no serious fears for the future. If the reports received concerning these matters are well founded, a renewed and larger demand for the company's Gutta-percha may soon be confidently expected. [For the last preceding report, see THE INDIA RUBBER WORLD July 1, 1904, page 345].

CANADIAN GOLF BALLS.—The Canadian government's commercial agent at Melbourne reports that Canadian golf balls have found much favor among expert players in Australia. They have not long been introduced, but a large and increasing sale is reported already.

#### NEW TRADE PUBLICATIONS.

UNDER the title "Goodrich Rubber Sundries" THE B. F. GOODRICH CO. (Akron, Ohio) have just issued a very comprehensive catalogue of goods specified to be "For the Druggist, Surgeon, Stationer, Dentist, Embalmer, Photographer, and Sporting Goods Dealer," which embraces not a few items not to be found in other catalogues and a considerable number which are protected by patents and thus kept within control of the company named. The catalogue embodies most of the contents of the publication from the same house in the summer of 1903, "The Newer Rubber Surgical Specialties." It is attractively gotten up and the illustrations are particularly effective. [5¾" × 8½". 84 pages.]

THE MASON REGULATOR CO. (Boston) issue a booklet relating to Mason Reducing Valves which cannot fail to be of interest to steam users, whether they have or have not adopted the Mason valve in their practice. The object of the Mason valve is to maintain an even surface of steam, regardless of the variation of the initial pressure or of the volume of steam required. It automatically reduces boiler pressure for steam heating systems of all types (vacuum included), and in all situations where it is desirable to use a lower pressure than that on the boiler. The same system is adaptable to water and air, no less than to steam. The Mason appliances have been in successful use for nearly a quarter of a century, during which time they have become known all around the world. [6" × 9¼". 56 pages.]

#### ALSO RECEIVED.

Eberhard Faber, No. 545 Pearl street, New York.—Illustrated Price List. [Lead pencils, penholders, rubber bands, erasers, etc.] 102 pages.

Westcott Chuck Co., Oneida, New York.—Catalogue of Westcott's Patent Lathe Chucks and Little Giant Drill Chucks. Catalogue A. 32 pages.

The Hygeia Nursing Bottle Co., Buffalo, New York.—The Hygeia Nurser. 8 pages.

The Williams Foundry and Machine Co., Akron, Ohio.—Williams Patent Cooling Chamber Attachment for White's Steam Tire Vulcanizers. 4 pages.

The Faultless Rubber Co., Akron, Ohio.—Faultless Rubber Sponges 6 pages.

Bourn Rubber Co., Providence, Rhode Island.—Price List of Rubber Covered Wires. 4 pages.

The Diamond Rubber Co., Akron, Ohio.—Diamond Wrapped Tread Tires and World's Records. 8 pages.

The Springfield Elastic Tread Co., Springfield, Ohio.—Easy Walker Rubber Heels. 12 pages.

The Thermalite Co., New York.—The Thermalite Bag. 12 pages.

#### THE NEW CONSULAR REPORTS.

THE American manufacturer or merchant who is in any way interested in foreign trade has more reason, year after year, to feel interested in the consular reports issued from Washington. Despite the criticisms which may always be heard of the American consular service, its system of collecting and distributing commercial intelligence is winning encomiums from competent observers in many other countries. The occasion for this paragraph is a recent change in the form and a general improvement of the official publication, which is now issued daily under the title *Daily Consular and Trade Reports*, for gratuitous distribution from the Bureau of Manufactures, Department of Commerce and Labor, Washington, D. C., and we commend to the rubber trade a careful examination of these reports, with a view to making them of use.



## THE GENERAL RUBBER COMPANY.

THE General Rubber Co., incorporated under New Jersey laws in March, 1904, with \$2,000,000 capital authorized (of which \$1,000,000 is stated to have been paid in at the beginning), was formed for the purpose of organizing a system of imports of crude rubber for the United States Rubber Co. direct from the primary markets. Subsequently the capital of the company was increased to \$3,000,000. Early in July of this year it was announced that the company had made an issue of \$9,000,000 in ten year 4½ per cent. debenture bonds to a syndicate of New York bankers headed by the First National Bank, making the total capitalization of the company \$12,000,000.

The General Rubber Co. will now have within its scope the supplying with crude rubber of the factories not only of the United States Rubber Co. but of the Rubber Goods Manufacturing Co. (lately merged with it), and, a Boston report has it, another important consuming interest. During the past year the General Rubber Co. has established purchasing agencies for rubber at Pará and Manáos, in connection with which arrangement occurred the expedition of Commodore Benedict on the yacht *Virginia* in the latter part of 1904.

It is understood that the presence of two important officials of the company in Europe at this time has a relation to the establishment of agencies for the more direct importation of various grades of rubber other than Pará, grades which enter more largely into the production of mechanical rubber goods than of footwear. The officers of the company today are as follows: William M. Ivins, president; Lester Leland and Samuel P. Colt, vice presidents; John J. Watson, Jr., treasurer; with the following additional directors: E. C. Benedict, Charles H. Dale, James Bishop Ford, Walter S. Bal-lou, and Anthony N. Brady.

The president of the General Rubber Co., Mr. William Mills Ivins, of whom a portrait is presented herewith, has had a much more intimate connection with rubber interests than may be generally known. This began in the days when Mr. Ivins was not only a close personal friend but the legal adviser of the late William R. Grace, who during the larger part of his life had important business interests in South America and for a number of years was an importer of crude rubber at New York to an important degree. Later Mr. Ivins, who during his whole career has been a member of the bar, turned his attention seriously to corporation law, in connection with which he became acquainted with Mr. Charles R. Flint, who was active in the organization of both the United States Rubber Co. and the Rubber Goods Manufacturing Co. In the early years of the latter Mr. Ivins was a member of the board of directors, one of the few instances of his sustaining this relation to any business organization, no matter how important his connection with various corporations may have been in the capacity of legal adviser.

Mr. Ivins, who is now in his fifty-fifth year, was born at Fredonia, New Jersey, being descended from Isaac Ivins, an English gentleman who settled in that state in 1711. It was in his first year that his family removed to Brooklyn, since which time he has lived continuously either in that borough or in Manhattan, New York. He was graduated from Adelphi Acad-

emy (now Adelphi College), Brooklyn, and took the degree of LL.B. at Columbia College in 1873. In the same year he became a member of the law firm of Bergen & Ivins (later Bergen, Ivins & Bergen), of Brooklyn, who were employed principally as counsel for the surface railway companies.

Mr. Ivins in 1876 was one of the organizers of a successful movement against the so called "Brooklyn ring." He was a member of the original executive committee of the State Bar Association of New York. He was major and judge advocate of the second division of the National Guard, State of New York. January 1, 1885, he was appointed judge advocate general of the state. In 1883 he was appointed one of the school commissioners of the city of New York. While city chamberlain (1885-89) he made a special study of the conditions of municipal government in the cities of the United States and Europe, and later prepared the most elaborate report of its kind for the investigation of conditions in New York city made by the so-called "Fassett committee," appointed by the state legislature.

Mr. Ivins was one of the organizers of the Reform Club and the Commonwealth Club in New York city, and as a member of the latter began the agitation for the adoption in the United States of the Australian ballot law, and made the original draft of the ballot laws of several of the states. In 1887 he published a book, "Money in Politics." Mr. Ivins was retained by the government of Brazil in the matter of the Misiones boundary dispute with Argentina, which was finally decided by in favor of Brazil by Mr. Cleveland, president of the United States. Later he was retained by the government of President Balmaceda, against which the Chilean navy had at that time revolted.

Since 1892 Mr. Ivins has devoted himself closely to his profession and is at present a member of the firm of Ivins, Kidder & Melcher. He is a member of the Players', Grolier, Lawyers', and Reform Clubs, and the Liederkranz Society, all in New York.

Mr. Ivins's qualifications for the position of president of this important rubber company will be seen in his comprehensive

experience in corporation law, success in which practice to-day involves executive capacity; administrative ability, as evinced in his tenure of public office; his personal knowledge of South American affairs; and his connections with rubber interests for years as above indicated. Mr. Ivins accompanied Commodore Benedict to the Amazon, and he is now with Colonel Colt in Europe on the business of the rubber company.

## CUBAN IMPORTS OF RUBBER GOODS.

THE official statement of values of rubber goods imported during the past two fiscal years, which appeared in THE INDIA RUBBER WORLD of July 1 (page 334) failed to include rubber hose. The complete statement is as follows:

	1903.	1904.
Hose .....	\$ 1,516	\$ 1,145
* All other .....	51,358	48,125
Total .....	\$52,874	\$49,273

\* The figure was published last month.

The imports of hose are credited to the United States with the exception of \$30 worth (from Spain) in 1902-03.



WILLIAM MILLS IVINS.

From Knap's "Notable New Yorkers."

## A NEW SOURCE OF AMAZON RUBBER.

By Louis H. Aymé, United States Consul at Pará.\*

THE India-rubber exported from Pará has been traced to four main sources: India-rubber proper from the *Hevea Brasiliensis*; "caucho" from the *Castilloa elastica* or a closely allied species, *Castilloa Ulei*; "manicoba" from the *Manihot Glaziovii*, and "mangabeira" from the *Hancornia speciosa*.

It has long been known that the *latex* of other trees is sometimes mixed with the *latex* of the *Hevea*, giving inferior products more or less readily recognizable. But from the last bulletin of the state museum (Museu Goeldi) it appears that a very considerable part of the India-rubber of commerce known as "fine Pará," and which has always been supposed to be the exclusive product of the *Hevea Brasiliensis*, is really from a new and hitherto unsuspected source, a tree of the genus *Sapium*, of the family of the *Euphorbiaceæ*. The honor of this discovery rests with Professor Henri Jumelle, who learned his facts from a Mr. Bonnechaux, a French explorer, and published a long account thereof in 1903. Dr. J. Huber, the eminent botanist of the Museu Goeldi (Pará), who has personally explored the Amazon, even in its remote headwaters, has succeeded in identifying the tree, and has written a most interesting report, in which he includes Professor Jumelle's article, and which I have translated *in extenso* as an appendix to this report. I have also had several interviews with Dr. Huber, and have examined the two small specimens of pure "tapurú" rubber, and also the many growing trees of *Sapium* in the botanic gardens.

Dr. Huber has also been kind enough to furnish me with a number of specimens of the leaves of several varieties of *Sapium*, together with a letter in which he refers to an entirely new tree, the "Burra leitera." These specimens and a copy and translation of Dr. Huber's letter are sent with this report.

The new source of rubber appears to have been precisely identified by Dr. Huber as *Sapium aucuparium* (Jacquin). The tree bears many native names—"tapurú," "murupita," "curupita," etc. It is of the family of the *Euphorbias*, of which the *Hevea* is also a genus, although widely separated.

A salient characteristic of the *Sapium* seems to be its polymorphism. Dr. Huber showed me a specimen which had borne very large, long leaves. It was transplanted to a shady place, and at once began to put forth small leaves not above one-fourth the size of the former leaves and of an entirely different form. Leaves of both kinds were growing on this tree, although the large leaves were disappearing. From Dr. Huber's experiments and observations it would seem that the same tree will assume widely different aspects under varying circumstances, the main controlling factors being sun, shade, dry ground, and wet or periodically inundated ground. Dr. Huber finds that the *Hevea* is similarly polymorphous, and asserts that the so-called "black" and "white" varieties are really one and the same tree, the "black" growing in the shade and farther from the water, and the "white" growing on the edges of the forest near water and exposed to the sun. This question of polymorphism becomes important, if, as seems probable, the quality and quantity of *latex* is similarly variable.

According to Mr. Bonnechaux the rubber from the "tapurú" trees exclusively can not be distinguished from pure *Hevea* rubber. But there is testimony to the effect that pure "murupita" rubber (which seems to be identical with "tapurú" rubber) is less

elastic and less resistant to traction than *Hevea* rubber. Mr. Bonnechaux says that the merchants of Europe have never made any complaints. This is by no means certain. If complaints were made the commission houses of Pará and Manáos would not make them public, but would merely refrain from purchasing the special grade of rubber complained of. Further, I find that there are sold in this market considerable quantities of a rubber which comes, for the most part, from the upper Xingú river, and which is known as "borracha fraca,"\* or "weak rubber," which resembles closely in appearance and quality the specimens of "murupita" or "tapurú" rubber in the Museu Goeldi, Pará. A price between that paid for "entrefina" and "sernamby" is paid for this rubber, showing that it is known to be of inferior quality. It is popularly supposed that it is made from *Hevea latex* mixed with "bastard rubber." What this last is does not seem to be known. In my opinion this "borracha fraca" is "tapurú" rubber.

But there seems to be doubt that large quantities of "tapurú" *latex* are mixed with *Hevea latex*, possibly to the extent of 40 per cent., without any difference in quality resulting, and it is even questionable to-day whether pure rubber, made exclusively from the *latex* of *Heveas*, is sold in any considerable amount. I have had some inquiries made for me in the market with rather startling results. A small quantity, a ton or so, of Upper river rubber was offered. A very low price was tendered, and to the expostulation that ensued the buyer replied:

"I can not offer more. This rubber is one-half 'murupita' rubber."

Quick as a flash the statement came: "No, indeed, sir; this is pure rubber. Farther down the river they do mix it, but this is pure."

The experiment has been tried several times and always brings the same response, a denial of any mixing in the particular rubber offered, but an acknowledgment that such mixing does occur. Now, I am informed that the "borracha fraca," which is probably pure "tapurú" rubber, is sold in the New York market for about the price paid for good "entrefina." All of which results in this: That there is produced from the *latex* of *Sapium aucuparium* (Jacquin) a rubber which finds ready sale and which, when mixed with *Hevea latex*, produces a rubber not to be distinguished from "borracha fina," or the supposed pure *Hevea* rubber. The expression used by a very prominent buyer here with whom I have discussed this matter is: "If there is such a thing as pure *Hevea* rubber."

This *Sapium* is a rather hardy tree. It grows with great rapidity. There is a tree in the botanic garden here 5 years old from seed, which is fully 8 inches in diameter 3 feet above ground and may soon be tapped. The seeds are small and apparently very hardy. They are certainly much less delicate than *Hevea* seeds, as Dr. Huber planted seeds which were more than 6 months old which gave strong, healthy plants. Mr. Bonnechaux speaks of an *estrada* of 140 "tapurú" trees, and from his data it is calculated this *estrada* yields about one-half a ton of rubber annually. The "tapurú" is said, however, to be deli-

\*Under date of May 31, 1905, Consul Aymé writes: "I have secured a good specimen of the 'borracha fraca,' referred to in my report of May 25 as coming from the upper Xingú river. The present specimen is from the Tapajós river, but is, I believe, the rubber produced by the 'tapurú' or *Sapium aucuparium*. For comparison I send two specimens of the supposed *Hevea* product, 'fina' and 'sernamby.'"

\*An official report published at Washington.



cate; that is, it does not stand hard tapping. But it seems probable that with careful tapping, avoiding injuring the wood, the tree would do as well as *Hevea* does.

In any case, if it is certain that the *latex* of this tree can be successfully mixed with *Hevea latex* it would give it an enormous commercial importance, for this tree is very abundant and of wide occurrence in the Amazon valley, although it is worked chiefly in the state of Amazonas. It would seem possible that *Sapium aucuparium* might be successfully grown in places where it has been found difficult or impossible to grow *Heveas*. And even where the *Hevea* has been successfully introduced, as in Ceylon, it would seem practicable to add to the *Hevea* plantations this quicker growing tree, to mix the two milks, and thus increase the total output.

I do not discuss the more scientific and technical part of Dr. Huber's article, although I can not refrain from calling attention to his commendable attitude in refusing to divide mere varieties into separate species. He has thus reached a conclusion of the utmost importance—*i. e.*, the extreme polymorphism of the species. It should also be said that Dr. Huber published in December, 1901, or two years before the publication of Professor Jumelle's book, an account of several species of *Sapium* which he denoted as producing rubber. He is now engaged in very interesting cultural experiments with a number of young trees and promises to publish further details as soon as he can make sure of his results.

It is a matter of great difficulty to get any accurate information on such matters. The actual rubber gatherers are uneducated men and, as a most potent reason, know that their "patron," the contractor, will seize upon any pretext whatever to offer a lower price for the rubber brought in. The gatherer, therefore, is exceedingly suspicious and takes refuge in stolidly replying "I don't know" to all questions. He has neither time nor inclination to climb lofty trees to get specimens of flowers, fruit, or seed, nor can the patrons give much more information; they are too busy making money and accumulating the largest possible quantity of rubber; also it is doubtful if they would furnish any information they possessed for might not the Pará or Manáos *aviador*, who sells the rubber finally, use it to the patron's disadvantage?

Nevertheless I am making attempts to secure some samples of pure "tapurú" rubber and shall try to gather all further information possible regarding this interesting subject.

Pará, Brazil, May 1, 1905.

#### SUMMARY BY THE EDITOR.

It appears from the documents which accompany the report of Mr. Consul Aymé, and which are too voluminous for inclusion here, that certain trees known as "tapurú," in the neighborhood of Manáos; "murupita," near Pará; and "curupita" on the north coast of the extensive island of Marajó, have become known to be producers of a perhaps important share of what is commercially termed Pará rubber. Only in a few instances have the products of any of these trees been known to be marketed alone, and the fact that Pará rubber so called maintains its superior position in the markets of the world is taken as an indication that the *latex* from these hitherto undescribed trees yields rubber of a high quality, the blending having no tendency to deteriorate the combined product. The trees to which reference is made are found in the forests in close proximity to the *Heveas* and the various species are tapped indiscriminately, their *latex* mixed, and all subjected to the same method of coagulation.

Dr. Huber, of the Pará museum, has devoted some study to the proper classification of the "tapurú," "murupita," and "curupita," with the result of being inclined to place them in the

genus *Sapium*. It remains to be determined as yet whether these trees, found in widely separated localities, are identical, owing to the incident of polymorphism (that is, a disposition to vary in their leaf formation under varying conditions), but for the present they are assumed to be the same and to correspond to the *Sapium aucuparium*—a species reported to be distributed over a large part of the Amazon region, but not understood formerly to yield rubber.

A French traveler, M. Bonnechaux, studied the production of rubber from the "tapurú," which, near Manáos, reaches a height of 25 meters [=82 feet] and at times a diameter of 1 meter [=2 feet 4 inches]. Twenty years ago, he writes, certain rubber gatherers, after first mixing the *latex* of the "tapurú" with that of the *Hevea*, without any known ill results, became bold enough to deliver balls made exclusively from "tapurú" milk worked in the same manner as used with the *Hevea*. No complaints came from Manáos or Pará, but nevertheless some patrons, learning the truth, refused to accept "tapurú" rubber except as a low grade product, whereupon the rubber gatherers ceased the exclusive working of the "tapurú" and went back to mixing its milk with that of the *Hevea*. Later, however, the demand for rubber having increased and the production of many *estradas* of *Hevea* having fallen off, the patrons have closed their eyes, first to the mixing of the milk and finally to the delivery of balls of "tapurú," which, however, they are not themselves able to distinguish.

M. Bonnechaux saw on the Madeira river, on a property belonging to Senhor Bentes Elioboro, an *estrada* comprising 140 "tapurú" trees of the average distance apart of 23 paces, which have been worked with care for five years, in the same season and in the same manner with the *estradas* of *Hevea* on the same property. A daily yield of 3 kilograms [=6.6 pounds] of dry rubber from the "tapurú" trees is mentioned, and though the number of days in the season on which the trees are tapped is not mentioned, the yearly yield is understood to be one-half ton.

It is interesting to learn that Dr. Huber and others mentioned by United States consul in his report are studying with interest the characteristics of this interesting new source of rubber, with a view, among other things, to determining the quality of its product as compared with the hitherto recognized source of Pará rubber, *Hevea Brasiliensis*. The facts collected by M. Bonnechaux were first made public by Professor Jumelle in his "Les Plantes à Caoutchouc et à Gutta" (Paris: 1903). This report was embodied, together with an extended study of *Sapium* species, by Dr. Huber in the December, 1904, issue of the *Boletim do Museu Galdi*, a translation of which paper forms part of Consul Ayme's report.

#### RUBBER REPORTED IN ARGENTINA.

THE ministry of agriculture of Argentina reports the discovery of India-rubber trees in the little known territory in the extreme northwestern part of the republic, particularly in the province of Jujuy. The discovery is credited to Ernesto Costa, since which time the agricultural department has dispatched its own agent, Juan Biale Massé, to the district. It is intimated that more than one rubber yielding species has been found, but the details given do not make clear what they may be. Argentina has not been known hitherto to contain any rubber. The region referred to lies between 20° and 25° south latitude, which is further south than any South American district now producing any rubber of consequence. The government is hopeful that the discovery will prove of much value in adding to the exportable products of the state.

## THE "GUAYULE" RUBBER PLANT—II.

By Rudolf Endlich, Ph. D.\*

THE industrial use of the Guayule plant dates only from the last few years, although several interested parties have been experimenting with methods of extraction during the past 15 years. The delay is principally due to the fact that men possessing a thorough knowledge of the rubber industry were not consulted.

Only one Guayule factory, a branch of the Compañia Anglo-Mexicana at Jimulco, near Torreon (Coahuila), is at present in operation. The success thus far attained by these works has recently caused the relatively small enterprise to be reorganized into a new company with German capital, the Compañia Exploradora de Caucho Mexicano, which is to enter upon the production of Guayule rubber on a large scale. For this purpose, four more factories have been planned, and will be located at Gomez Palacio, at Torreon, at Saltillo, and at San Luis Potosi.

A competing firm at Monterey (Nuevo Leon) has discontinued the extracting of rubber before the enterprise had progressed beyond the experimental stage. However, an American syndicate has already completed the erection of its buildings at Saltillo. A short time ago, moreover, the firm of E. Madera Hermanos at Parras, commenced the building of a Guayule factory on their ranch "El Venado."

The Cedros company, furthermore, whose plantation "Cedros" has an area of 438 *sitios* (at 1755.61 hectares) on one-seventh of which, or 60 *sitios* (105,366 hectares), Guayule plants are said to grow, intends to establish a large plant on which 15 to 20 tons of crude material are to be handled daily. Two American companies, the Continental Rubber Co. and a California syndicate likewise intend to erect rubber works in the neighborhood of Torreon.

As the various methods of extraction are covered by Mexican patents attempts have been made to extract the rubber in foreign countries. It is stated, however, that only a few individual shipments of Guayule plants have been made to Glasgow and other ports. There is considerable doubt as to whether this exportation will prove profitable, for not only the relatively high freight rates of Mexican railways must be taken into consideration, but likewise the probability of a future high export duty, such as is at the present time being levied on other Mexican crude vegetable materials.

It is said that an enterprising genius has already undertaken the production of Guayule rubber on a large scale of chewing the bark, in the same way as toy rubber balls are now made in the state of Durango. But even if we do not consider the fact that this method can hardly prove successful, because it takes a Guayule chewer two days to produce a toy rubber ball, the enterprise is considered to be doomed to failure, as the persons engaged in it are soon attacked by lockjaw and have to abandon the work.

There are several more or less practical methods for extracting the Guayule rubber.

By the "Bergner" process (Mexican patent No. 2147, August, 1901) the plants are crushed in a Krupp crusher, and ground in a ball mill (Krupp patent) until the larger part of the wood is separated, and the rubber forms granules in conjunction with the remaining wood particles. These are separated from the wood either by sifting or by means of a suction device. For

purifying the rubber, the granules are placed in an iron vessel having a double bottom and heated by steam. As soon as the mass boils a certain specified quantity of a sodium salt is added, although this addition is not absolutely requisite.

After boiling, the mass is transferred to a wooden vessel where it is precipitated by the addition of cold water. After removing the water, the mass is passed through drum sieves having double bottoms. The rubber, which now contains only a few particles of wood, is thereupon boiled with sodium hydroxide, and precipitated by a solution of calcium chloride. This product is then compressed into thin flakes by means of special devices.

There are, however, simpler and more practical processes, in which the crude material, ground to a fine powder, is mixed with alkaline substances, and boiled in steam so as to separate the particles of wood.

These processes are probably similar to those used in the manufacture of wood pulp, which consists in heating crushed wood, after a 10° to 12° Baumé solution of soda has been added, during 5 to 6 hours with steam under a pressure of 6 to 14 atmospheres. This operation serves the purpose of dissolving the binding substances, thereby liberating the minute particles of wood.

After the pulp has been removed, the mass is washed in water and the alkaline substances are neutralized by diluted acids. The rubber thus obtained is dried in the shape of large flakes either in the sun or in rooms especially adapted to the purpose. The residue, consisting of wood and bark, is used as fuel for the steam boilers.

The details of the rubber extracting processes are, of course, kept secret by the manufacturers. It is said, however, that bisulphide of carbon is used in the extraction process of the American Guayule works at Saltillo.

Guayule rubber extracted by the ordinary methods soon blackens on the surface, while the inside of the flakes retains its original greenish gray color. Its disadvantage consists in the percentage of foreign substances it contains—27 per cent. of gum and aromatic matters, for instance, besides a variable quantity of wood particles. The gum is especially harmful, as the resinous quality of the rubber, which impairs its elasticity, is attributed to its presence.

The fact that Guayule rubber is easily vulcanized may be called a good quality. Its smell, which is not disagreeable, is due to the aromatic substances contained in the bark.

By the introduction of a new process at Jimulco, Guayule rubber has been so far improved that it usually contains no more than 10 or at most 15 per cent. of foreign matter. This rubber, which is very dark brown on the surface, but lighter in color in the interior of the flakes, is at the present sold at a price of more than 5 marks per kilogram, while only 3 marks per kilo were obtained for it before the introduction of the improved method.

The rubber extracted at a chemical laboratory in Germany, to which we have before referred, showed only 5 per cent. loss by washing, and is said to have been appraised in Germany and England at from 7 to 8.20 marks [per kilogram = 75¼ to 83¼ cents per pound]. If the method of obtaining a product of such purity is practicable, it might become possible to use the gum for technical purposes, after separating it from the rubber.

\*Translated for THE INDIA RUBBER WORLD from *Der Tropenpflanzer*, Berlin, IX Jahrg., Nr. 5.



The result of practical trials, based on the laboratory experiment, have not as yet been made public.

The output of crude rubber (including the gum and other foreign substances) varies according to the moisture contained in the plants and is figured at from 8 to 12 per cent. Consequently, the output in the manufacture of rubber of superior quality, containing only 12 per cent. of foreign matter would vary between 6.8 and 10.2 per cent.

A plant with a daily capacity of 1000 kilograms [=2204 pounds] of Guayule rubber would daily require 10,000 to 14,286 kilos of dry crude material, figuring on an output of 7 to 10 per cent.

Now, let us suppose that 1 hectare [=2.471 acres] of the calcareous mountain slopes of which we spoke in this article furnishes 600 kilograms of Guayule plants. The extracting plant above referred to would daily require the product of 16.7 to 23.8 hectares, or the plants from 6012 to 8568 hectares annually. Even if we assume that the next generation of plants could be harvested after the lapse of 10 years, it would be necessary to command an area as large as 60,120 to 85,680 hectares [=148,557 to 211,715 acres] of Guayule producing land.

Now, if we bear in mind that even under favorable conditions only one-seventh part of a large area of land produces Guayule plants, it becomes evident that enormous distances and consequently difficulties in the obtaining of the crude material for such industrial enterprises will usually have to be taken into consideration.

Although a large part of the more important Guayule districts commands good railway facilities, there still remain immense areas whose exploitation would be made difficult, if not impracticable, on account of the lack of means of transportation.

These difficulties in transporting the material, which are mainly due to the fact that water in sufficient quantities for the requirements of pack animals cannot be found in these calcareous mountain districts, are encountered even where the lands are no further removed from a station or watering place than 20 or at most 25 kilometers [=12½ to 15½ miles], a day's trip (both ways).

The cost of transporting the crude material is not of great consequence, even where full day's journeys are concerned, especially when donkeys, the most suitable pack animals in the *chaparrals*, are employed. A donkey driver, for instance, is paid about 37 cents per day, and for his wage he must not only transport the plants on two or three donkeys, but likewise gather their loads. Twenty-five cents would be a high figure for the feeding of a donkey, and it often costs only one half of that sum. Each animal carries an average load of 75 kilos.

For an entire day's journey (20 kilometers and return) two loads (150 kilos) would therefore cost  $50 + 37 = 87$  cents, and three loads (225 kilos)  $75 + 37 = 112$  cents. The transportation charges per ton of crude material would therefore be 4.97 to 5.80 pesos [Mexican silver dollars]. It is asserted, however, that for transportation over long distances, such as are already required even now, the cost is sometimes increased to 25 pesos per ton.

The comparatively large amount of water required in the manufacture of Guayule rubber makes it necessary to seriously consider this question when locating a plant. The supply of fuel offers fewer difficulties, although it is sometimes expensive. While firewood can as yet be usually obtained in sufficient quantities and at low rates from the plantations of the Guayule district, its purchase in cities like Torreon, where the price of mesquite wood (*Prosopis juliflora*) is 5 pesos, is quite expensive.

In the majority of cases the rubber manufacturer has to take

care of the railway transportation of the crude material, while the gathering and conveying of the plants to the stations is usually attended to by the landowners. The prices to be paid for the Guayule plants will as a rule be comparatively low, especially when the landowner is interested in the enterprise and shares in its profits.

The purchase or lease of Guayule lands offers material advantages to the rubber producer. When the plants are gathered on purchased or leased ground nearly the entire cost consists in transportation and gathering expenses as the working of the plantation, either by the raising of goats, cattle, horses, and mules, or by the exploitation of uncultivated fiber plants, such as "lechuguilla" (*Agave heteracantha*, Zucc.) and several varieties of the so called "palma" (*Yucca spec.*), assures the earning of a fair rental. Still, owing to the increased demand for Guayule, it will not be very easy to either purchase or lease suitable lands at the present time.

It is even more difficult to approximate the total supply of crude material than to figure out the average output per hectare. Let us assume that in the area of 75,000 square kilometers, comprising the districts where the Guayule plant is principally found, one-tenth actually contains a supply, this would mean a territory of 7500 square kilometers or 750,000 hectares [=2895.4 square miles]. If we figure the output on ½ ton per hectare, we get a total supply of 375,000 tons, which, at the rate of 7 to 10 per cent. rubber, represent a total of 26,250 to 37,500 tons of rubber. The supply of Guayule would therefore be sufficient for operating the rubber plants already planned for a number of years.

In our calculation, however, the distant parts have been included, although their exploitation would be very difficult on account of the lack of water. These obstacles could be best overcome by cultivation, which, in fact, has already been planned by the *Compania Explotadora de Caucho Mexicano*.

The very limited requirements of the plant, the small value of the lands within the Guayule districts, as well as the low rates of wages, are favorable factors for the success of Guayule cultivation.

Practically nothing is at the present time known regarding the development of the plant from its seed. Some interested parties assume that the cultivated plants (as well as the young plants in their natural state) will have reached the average height of the wild growing dwarf trees in from 8 to 10 years, while others believe that this growth will not be attained in less than 12 to 15 years.

Judging by their general appearance, the majority of the Guayule plants now being worked are older than 10 years. Younger plants, however, produce rubber in accordance with their bulk, and they may therefore be gathered before having reached their full growth, without damaging the crop to any considerable extent. In favorable districts, where the plants weigh 1 to 2 kilograms and even more, an average weight of 200 grams might be counted on, even though the plants were harvested after 6 years or earlier.

In this way a Guayule plantation, supposing the planting to be done in rows at a distance of 1 meter apart, with the plants space in the rows at .50 meter apart, would produce about 20,000 plants to the hectare, or 4000 kilograms of crude material.

A daily output of 1000 kilos rubber would, therefore, figuring on a percentage of 7 to 10 per cent., consume the plants growing on 2.5 to 3.5 hectares, thus making the annual consumption (360 days) equal to the product of from 900 to 1260 hectares.

A harvest of 4000 kilos [=8,818 pounds] of Guayule plants which, on the basis of the percentage quoted above, would pro-

duce 280 to 400 kilos of rubber, would, at the rate of 5 marks per kilogram rubber, be equivalent to 1400 to 2000 marks [= \$333 to \$476] gross receipts.

Future experiments must show whether, in the case of Guayule cultivated on better soil, rich in lime, the proportion between the weight of the plant and the output of rubber will be equally favorable when compared with the wild growing plant. However, even if the proportion of rubber in plants cultivated in good soil should be less than that found in the Guayule growing on the sterile mountain slopes, the increase in the gross weight of the plants harvested might make up the difference.

The Guayule offers the following advantages over other rubber producing plants:

1. Its requirements in the matter of soil and moisture are limited, and it may consequently be used for making sterile lands productive, providing the soil contains a sufficient amount of lime.

2. It grows in a splendid subtropical climate, a fact which is especially important on account of its bearing on the question of labor. The plants, moreover, do not suffer from night frosts.

3. The plants may be gathered throughout the year.

4. In suitable districts its cultivation promises high net returns, provided it is carried on conjointly with the manufacturing of rubber.

Now, as in a large part of German Southwest Africa natural conditions (soil, climate, altitude, etc.) are similar to those prevailing in the northern part of the Mexican highlands, it becomes highly probable that the Guayule plant with its very limited requirements would likewise flourish in many districts of that colony.

## DRAWBACKS TO THE RUBBER TRADE.

THE following reports, derived from various sources during the past month, are presented as specimens of the many drawbacks to the crude rubber trade in the Amazon valley, all of which have an influence in increasing the risks of the business and operate against the cheapening of rubber to the consumer:

### I.

THE directors of The Amazon Steam Navigation Co., Limited, at the thirty-third ordinary general meeting of the shareholders (London, June 29) reported: "Unfortunately the navigation of the rivers, and especially that of the Upper Purús, Acre, and Jurúa districts, from which the company derives a large proportion of its revenues, was attended by exceptional danger, owing to the unusually large number of partially or wholly submerged logs, from striking which very many casualties resulted. The board deeply regret that among the steamers which were lost or severely damaged from this cause were the company's vessels *Antonio Lemos* and *Barcellos*. The former—a sternwheel steamer—was holed and submerged in the upper Purús, in November last, while the *Barcellos* suffered similarly early in December in the same river. There is reason to hope that when the rivers are at their lowest, which is expected to be early in July, it may be possible to effect considerable salvage. With this object in view, properly equipped expeditions have been despatched from Pará and every effort will be made to refloat the two steamers, the book value of which is £26,000. Meanwhile as a provision for the eventual loss which may result, the extent of which cannot yet be determined, the directors have charged to the insurance fund £16,000, which amount is replaced by a transfer from profit and loss account."

In THE INDIA RUBBER WORLD of October 1, 1904 (page 18) a Manáos contributor wrote: "The expenditure of a million

dollars for improving the waterways in that region [the Acre district] would work a wonderful improvement in navigation, and do much to stimulate the business of gathering rubber. But where is the money to come from, and who would undertake the work? There is no private interest prepared for it, and government undertakings in the Brazilian states require an immense amount of time for results, if any are ever reached. During some months of each year the Acre itself is a very narrow and shallow stream. It could still be navigated by steam launches, however, but for the many trees which fall into it and which it is nobody's business in particular to remove. Yet the total cost of removing such obstacles, and of dredging here a bit and blasting there a bit, would not be great, in view of the benefit to be derived, and the stream could be made navigable all the year and for larger vessels than can now pass through it during low water. At present communication with the rubber districts on the Acre is practically cut off for months at a time. Not only does no rubber come out, but the settlers there have no means of obtaining supplies. All their food is imported, and at times their condition becomes one of real hardship from the lack of food, resulting in weakness and inability to resist the fevers so prevalent there. The keeping open of the Acre alone would work a great change in the rubber business of the Amazon valley."

### II.

THE United States consul at Pará, Mr. Louis H. Aymé, reported on May 11: "The usual period of low water (*vasante*) on the upper Amazons has set in this year much earlier than usual. In consequence a fleet of 21 steamers and a very large number of sailing and rowing craft of considerable burden, all heavily laden with the annual supplies for the rubber camps, are stopped at the mouth of the Purús river, many of the boats being high and dry on the banks. Some of the supplies are more or less perishable and all are sorely needed; failure to get them to the camps will mean heavily diminished returns of rubber next season. At the same time the unusual and very heavy rains in the lower river region have severely affected the production of Islands rubber, and very little may be expected for the next six weeks or more. The trees begin to blossom in June and during this time the production of *latex* diminishes, so that very little Islands rubber is to be expected in this market for the next four months or more."

### III.

BORGES, HALL & Co. have protested against the extra 3 per cent. duty recovered by the Manáos customs on a parcel of rubber shipped by this firm. Duties on Acre rubber were formerly 15 per cent. but were this year raised by the budget to 18 per cent. Before the news of the increase reached Manáos, Messrs. Borges, Hall & Co. seem to have despatched and shipped a large parcel at the previous rate, on which the custom house has now obliged them to pay the difference, amounting to 3134 milreis. Clearly, if the government fail to keep even their agents properly informed of fiscal alterations, the public can know nothing about them and cannot be made retroactively liable. Messrs. Borges, Hall & Co., in all probability, bought and sold the rubber in question on the footing of 15 per cent., and if obliged to pay 18 per cent. will stand to lose 3134 milreis, through the failure of the government to keep the customs at Manáos properly posted. This is not right and, no doubt, will be taken into consideration by the minister and allowance be made for this particular and similar cases.—*The Brazilian Review*, June 6, 1905.—[The amount named, 3134 milreis, would equal, with exchange at 16 pence, \$1016.77 gold, on a shipment of the total value, as indicated by these figures, of \$33,892.]



## THE RUBBER FACTORIES OF JAPAN.

HERE is presented on this page what is believed to be a complete directory of rubber manufacturing concerns in Japan, including first the name of each company in Japanese type (the lines

reading down the page), followed by the Japanese words in English type, and finally the English equivalents for the native names.

The total capacity of the rubber factories of Japan is not yet large, but the promoters of the industry have shown a degree of energy and persistence that is characteristic of the people of that country, and a marked impetus has been given to the industry of late by the pressure of the government's demand for goods of every kind in consequence of the war.

From the beginning the insulated wire industry has formed an important branch of the rubber industry in Japan. The people of that country were early in appreciating the advantages of the industrial uses of electricity, and the domestic manufacture of wire for electrical transmission has acquired considerable dimensions. Hand in hand with this development has been the progress in insulating wire, including the employment of rubber.

The Yokohama Electric Wire Manufacturing Co. have perhaps the largest capacity in the line of rubber insulation. Of late their factory has been undergoing enlargement, and their rubber insulation department has been placed in charge of an expert imported from the United States.

The Fujikura Insulated Wire and Rubber Co. (Tokio) likewise has been growing of late, including the installation of machinery during the past year which has doubled the capacity of the works—now almost equal to that of the Yokohama company. The size of the works is indicated in part by the fact that the new engine and boilers are of 100 HP. The work of this company, by the way, is no longer confined to wire insulation, but embraces the output of various other products of rubber. The factory was established in 1884 by Zempachi Fujikura, who at his death in 1901 left it on a profitable basis. He had been interested in other industries as well, being a director in the Oriental Rubber Co., Limited. A nephew, Mr. Kenzo Okada, now in an important connection with the works, spent several years at one time in the United

States, making a practical study of the rubber industry.

The Mitado Rubber Manufacturing Co. (Tokio) is perhaps the largest of the companies in the mechanical rubber branch.

The production also embraces toys. This company is the outgrowth of a small beginning made some 15 years ago by a young Japanese who gained some insight into the rubber industry on a visit to America.

The Oriental Rubber Co., Limited (Tokio), which ranks with the last named in extent, was founded about 1880 by a Mr. Ogiwara. By 1900 the capital employed had been increased to 500,000 yen [=about \$250,000 gold]. The company manufacture hose, valves, gaskets, and mold work generally, employing about 225 hands and using a steam equipment of 200 HP.

The Meiji Rubber Works (Tokio), represented at the Osaka Exhibition in 1903 by an extensive display of garden and other hose, packing, valves, balls, mats, and matting, issues a catalogue of these products filled with illustrations very similar to those appearing in American rubber goods catalogues.

The Japan Rubber Co., Limited (Tokio), organized in 1900, was the result of consolidating the Yoshida and Hashimoto factories, with a view to meeting the competition of concerns much larger than either of them working singly. The capital at last accounts was 150,000 yen [=about \$75,000, gold], and the output is mechanical goods.

As far as druggists' sundries go, the Japanese rubber manufacturers have not as yet attempted to do more than experiment with them in a very small way. In a very few years, however, they doubtless will have entered the field, because to day both England and America furnish many goods for that market. In rubber footwear nothing at all is done nor have any of the factories attempted to make hard rubber goods. What little rubber clothing is in use is all imported. The machinery used in these factories is the product of either English or American foundries, with the exception of some few machines built in Japan. The crude rubber which they use as the basis of their work comes chiefly from England, while fabrics and compounding supplies come largely from the United States. So far, the country has done no reclaiming, and no one there is making substitutes.

藤倉電線護謨合名會社

FUJIKURA DENSEN GOMU KAGAKU KAISHA  
Fujikura Insulated Wire and Rubber Co. Tokio

三田護謨製造合名會社

MITADO GOMU SEIZO MEI KAISHA  
Mitado Rubber Manufacturing Co. Tokio

横濱電線製造株式會社

YOKOHAMA DENSEN SEI GOMU KAGAKU KAISHA  
Yokohama Electric-Wire Manufacturing Co., Limited

東洋護謨株式會社

TOYO GOMU KAGAKU KAISHA  
Oriental Rubber Co., Limited Tokio

日本護謨株式會社

NIPPON GOMU KAGAKU KAISHA  
Japan Rubber Co., Limited Tokio

明治護謨製造所

MEI GOMU SEI SHO  
Meiji Rubber Works Tokio

津田商店

Tsuda & Co. Kyoto

萩原護謨製造所

HAGIHARA GOMU SEI SHO  
Hagihara Rubber Works Tokyo

大阪樹脂製造所

OSAKA SHI SEI SHO  
Osaka Gummi Works Osaka

## JOTTINGS BY AN AMERICAN IN EUROPE—III.\*

TO THE EDITOR OF THE INDIA RUBBER WORLD: I am writing in Montargis, one of the most beautiful and most interesting cities of middle France. Were your readers not such a serious, busy lot, I would like to tell them about this quaint city. It is modern and it is old, full of nooks and corners which one comes upon unexpectedly and with surprise; its people and their habits are quite peculiar and one sees strange sights and sometimes hears voices coming as it were from the ground, or the water; of this latter element the city has a quantity and it is put to all uses except that of a beverage. But I am forgetting that yours is a trade journal and that your subscribers expect something at least leaning towards the rubber industry.

One sees too little in the trade journals about the French rubber factories, for there are a large number of them and many are very interesting. There is but one, however, which really makes boots and shoes, in addition to its other products, and that is the very important concern known as the *Établissements Hutchinson*. A few lines about this plant may interest your readers for various reasons. It differs somewhat from all other factories; it makes things which many important factories prefer to buy; the name "Hutchinson" is an American name; the factory was founded and for years owned and managed by Americans; its trademark is distinctly American, and consists of the eagle and stars familiar to all Americans on the United States shield.

But not only is our proud bird ground into the mud on the shoes of French people, but it does what all Americans should expect it to do: it soars above the whole country surrounding the factories, for it stands with outstretched wings on the pinnacles of two of the towers surmounting the principal building, and by its attitude seems to be bidding defiance to those who place it on the bottoms of shoes. It does even better than this, for from the Hutchinson pneumatics it throws mud and dirt at all who get within its reach. Our poor bird serves many ends on this continent. In Hamburg he graces the wine cards of a so-called "American bar," and in most of the cities it has become the sign of the pseudo Yankee institutions where liquid mixtures are compounded under American names but which few would recognize as of American invention.

In the early days of the now great industry due to the work of the immortal Goodyear, a Mr. Hiram Hutchinson had in hand the old New Brunswick Rubber Co.; later he built the Newark Rubber Co., the present factory at the canal being of his construction.† In 1853 he came to Paris and looked about for a place to found a new rubber factory and selected the place now known as Langlée, in Châlette, near Montargis, about three hours' ride from Paris. The location is a beautiful

one, near several communes which furnish a great number of work people, and near a canal which gives an abundant water supply. One of the reasons causing this selection was the granting by some one of the perpetual right to take a certain amount of water for power purposes. This now gives them about 40 HP. through the two old turbines. Hiram Hutchinson, Sr., the founder of the company, died in 1869, but previous to this time he had formed a company known as Hutchinson, Poinsel & Co., and Alcazar, his oldest son, had been taken into the firm.

Alcazar succeeded his father but in 1872 Mr. H. P. Moorhouse came over from the United States as the representative of other heirs of Hiram, and so it came about that on January 1, 1873, the firm took on the name of A. Hutchinson & Co. Mr. Moorhouse was with the company until 1883. I believe Mr. Alcazar Hutchinson died about 1889, after which the company was managed for a while by his family. For reasons which do not concern us, the company liquidated in 1900, when the present company was formed. Not a Hutchinson remains in it. The two older generations have passed on; of the younger, one is in America and one here in France. Mr. H. P. Moorhouse lives in Paris as the European representative of several important American concerns.

Most American rubber people know Mr. Moorhouse, and I believe all the Europeans do and, therefore, I need not refer to his geniality, his good nature and kindness to such Americans as he may meet in Paris. He lives beautifully with his two daughters, the eldest of whom is the widow of our late friend, Charles L. Johnson, of the Candee and United States Rubber companies, and she too, has a hearty welcome for her American friends. She is mentioned here because she is a direct descendant of the Hutchinson family through her mother, who was a daughter of Mr. Hiram Hutchinson, Sr.

The technical director of the new company is Mr. Gustave Bouguillon, one of the best known rubber men in France. Through his energy and skill the company is assuming its old place at the head of the French rubber industries. Its boot and shoe business is its chief feature. Much of the machinery is very old and out of date, and as compared to American methods moves very slowly; its mill room is a wonderful display of ingenuity, not of that sort which is generally welcomed by manufacturers, but of the kind that seeks curves where straight lines would be better, according to my ideas. One small row of machines is parallel to the driving shaft, while by far the largest number are at right angles, each one connected to a main line by bevel gears. The noise is great, and I think the useless friction greater, but it has the advantage of being able to make repairs without stopping the main line.

I note these things, Mr. Editor, because they seemed strange to me, and I was told the plan was the best. The world was not made in a day, neither can a rubber plant be remodelled in a day and be kept at work too, but the process has begun and made great headway. A new engine room has been built and equipped with as good engines as could be desired. The shoe room is the place, however, that is of interest. In fact, some of our younger men would give it all of their attention, not because it would be necessary, but because in no other place in the world can be seen such a neat, well dressed, pretty set of girls, and their nationality adds something which cannot well be described, but which a Frenchman calls *chic*. They work

\* No. 1 of this correspondence, published in THE INDIA RUBBER WORLD, May 1, 1905, related to the rubber work at Hamburg and Elbe, and No. II, in the June 1 issue, to the rubber industry in Sweden.—THE EDITOR.

† The deposition of Hiram Hutchinson, taken in the city of Paris in 1854, before the United States consul there, in the suit of Horace H. Day v. Isaac Hartshorn and Daniel Hayward, in the United States circuit court at Providence, Rhode Island, contains this statement:

"I have been engaged in the manufacture of India-rubber constantly since 1835—from that time to 1843 in New Brunswick, New Jersey; from 1843 to 1853 in Newark, New Jersey; and largely engaged since 1845. I was president of the Newark India Rubber Manufacturing Co. from its incorporation in 1847 to 1852.

It may be added that the occasion of Mr. Hutchinson's going to Europe was his purchase, in connection with Mr. John C. Henderson, a New York merchant, of the rights under Goodyear's vulcanization patent for the continent.—THE EDITOR.



rapidly and well; they make a good shoe, and make it in endless varieties, using 112 different trademarks.

The system, parts, and tools used are very much like those common to most factories of the kind. Here one meets an old friend, a complete stranger in other parts of Europe—the wooden last; they have two last turning machines and can keep the supply equal to the demand. The shoe rack used is very short, holding eight shoes; here again a departure is made from the universal custom; the short racks are loaded to the tune of six on a small hand car, rolled into the varnish room, at the foot of a long incline, and carried into the vulcanizing chambers, rack by rack. There are no tracks in any part of the shoe factory. The vulcanized goods are once more packed on to the carts and at the expense of much strength and labor are brought back to the making room, or rather its end, which is the packing room. They make nearly all the light styles made in America; they make blacks, white, and tans, an endless variety of tennis goods in all colors and prices, and a really fine and high priced calf shoe with rubber sole.

At the other end of this room part of the cutting is done, the balance being done in a room adjoining. Two power cutters are used; they work rather slowly, but are good machines and no workman can ever lose a finger or hand in their use because stock, table, and die are withdrawn after each stroke. No hand dies are used, and all hand cutters use water on their blades and much of it is slopped about. These men and boys are quite expert and work rapidly and the prices paid for piece work are very low. The methods of stock handling are a revelation and require much time, but I am getting too lengthy.

I found two machines used for cutting out frictioned stock by means of a quick running hand knife, which did a whole lot of work in a very short time. During my rambles I unfortunately kicked the larger part of the top on one of my shoes, and as I was bewailing my hard luck, for I was miles from my hotel and had a whole day's tramping about the factory ahead of me, when the gentleman with me said, "We will fix that," and passing through a door nearby, I was in a full fledged leather shoe shop and in ten minutes my top was sewed on in good shape, and so I discovered that they had a leather shoe shop where all the high priced calf skin shoes were made, as well as the cheapest tennis. Then another afternoon I was tempted into a doorway and up a flight of stairs, and I fell upon another surprise, a fully equipped knitting mill with 30 machines turning out double threaded net for shoe making, and two thread doubling machines; all the net made here is of the double threaded variety. I naturally looked for a spinning room next, but have not yet found one, and I was told upon inquiry that they actually bought the thread used.

The shoe department is under the charge of an English gentleman named Chapman, who has been here now 22 years. A strange sight to an American visitor is the bottle of wine within the reach of each girl, and nearly every man comes to work morning and afternoon with the neck of a quart bottle protruding from some pocket or the other.

An entire new shop for the manufacture of pneumatic tires has been built. It is all ready for operation with the exception of some electrical machinery which is now due. As soon as this is installed they will have largely increased facilities for the making of an auto tire which is already making a name for itself in this country of automobiles.

All kinds of rubber hose are made, entirely by hand work. Garments and mechanical supplies, belting and surgical goods, and in fact a little of all that is made in rubber is here produced. A duplicate steam plant and engine are always ready for use in case of an accident to the regular plant. The loca-

tion is a fine one, about  $1\frac{1}{2}$  miles from Montargis. A special branch runs in to the works from the railroad track, and a basin capable of holding a half dozen large barges connects by a private canal to the large canal which passes not far from the works; the yard is dotted with large trees, a nice garden is kept there, and all in all the place is a very pleasant one. The works are in a place called Langlee, as already stated, while after a few moments' walk one finds a small comely village called Verines, part of the commune of Châlette; one or two other villages are scattered within easy reach.

Not taken within the grounds is the old home of the Hutchinsons known as "Le Chateau," a handsome building with stables and a park, a garden, and a small pond. Non use has caused the building to become a little dilapidated and since a year or two its lower floor has been used as a storehouse. In the interior are many handsome mural paintings by the Countess of Loyauté, who married one of the Hutchinsons, and so fall to common uses the homes of the magnates when once they lay aside the cares of life.

As the noon hour whistle sounds, the pump in the corner of the yard is at once surrounded with a bevy of men and women each holding in hand a bottle half full of red or white wine, with water so as to increase the quantity of liquid but not the strength. Hundreds pour out of the gate, and here one can spend a few moments to good advantage, for here is a line of small merchants at hand and ready for business. The first one is a large red faced woman with a cart loaded with newspapers. It is astonishing to see the number who stop here to buy or take a paper. Then come cold meats and sausages, fruits and vegetables—among the latter great bundles of asparagus; various knick-knacks, ribbons, laces, combs, pencils, etc., and finally the wine merchant, selling from his cart either by the glass or by the pint or quart, red or white wine. The operatives all seem happy and contented, but the pay is very small when viewed from American eyes. There are many old people, comfortably off, who still come in daily, pretend to work, and do draw their pay. Some of these are so slow that they fail to move to let themselves pass.

I think, Mr. Editor, that this must be the El Dorado of rubber men; perhaps I had better qualify that and say rubber tire men. Ninety-five per cent. of the *fiacres* in Paris are pneumatic tired, and these number away up into the tens of thousands; autos of various kinds are numberless. On Friday of last week took place the great race at Clermont-Ferrand. On the Sunday preceding, autos of all kinds began going through Montargis, and day and night until Friday morning the howl and thump of the auto was music to the ear of the rubber man. On Wednesday a count was made of these passing my hotel between 7 A. M. and 6 P. M. and it was 362.

A day or two ago I heard a rattle and a thump, and through the window near me came the fumes of vile gases, so sweet to the nostrils of the lovers of the machine; in the yard before me a huge racing machine had come to anchor; a machine which without trouble makes its 115 kilometers [=71½ miles] an hour. It has come here as an appendage of the works and is to make genuine endurance tests of the Hutchinson's "pneu."

I have given you, Mr. Editor, for the benefit of your readers, just a few of the things I have seen and the impressions they have made upon me. My journey among rubber people, now in the beginning of its fifth month, has been a continual round of pleasure and surprise, and as most of those seen are readers of the "best rubber paper in the world" (quotation from one of the best known manufacturers of Europe), I hope they will accept through this medium my thanks for the endless courtesies extended to the rambling

ALASION M. STICKNEY.

## THE INDIA-RUBBER TRADE IN GREAT BRITAIN.

*By Our Regular Correspondent.*

**D**ESPITE the continued high price of raw rubber there seems nothing to complain of in the volume of trade to judge by what I hear at the large works. Extremely busy in nearly every department is a common report—a state of affairs which shows no likelihood of proving evanescent. Although the price is still high, it has remained for some months now at practically the same level. Thus the awkward factor which dominated last year's trade has been eliminated and a fixed ratio between manufacturing costs and selling price has been maintained. Testimony to this was borne by the chairman at the recent half-yearly meeting of the Silvertown company, the condition of affairs showing an improvement such as will, it may be imagined, result in the shares of this company regaining their level of two years ago.

A GOOD deal is being heard at the present time of the pneumatic hub which is to replace the ordinary rubber tire, with a great saving of rubber. I am told in one quarter that the idea is an old one, though it does not seem to have had much of a trial.

Whether it is a novelty or not a strong London syndicate is now engaged in developing it, and great results are expected. The claim is that by the fitting of a pneumatic cushion round the hub the same effect as far as easy running is concerned is obtained as in the case of the ordinary rubber tire encircling the rim.—Though not exactly germane to this topic, I may mention that nothing has been heard of the armored cloth tire which the Dunlop company were to make under Midgley's patent, and it is therefore natural to assume that it has not proved a success.

I UNDERSTAND that a French rubber company of some prominence has recently patented a machine whereby the canvas in old rubber is entirely separated from the rubber. The process is quite mechanical, no chemicals or heat being used. In these days of high prices for rubber scrap such a process is, of course, of more interest than in the old days one can remember, when it was customary to burn insertion under the factory boilers. I hope to give further details of the machine shortly.

ALTHOUGH I understand that the venture has not been crowned with success, it may not be without interest to what has been attempted by a London firm in the way of utilizing old cab tires. The idea was to buy up worn tires at scrap prices, to cut them into segments of about a quarter inch width and to put them in contiguity on stiff iron wire. A new tire was thus made and a considerable number were put into use, the low price at which they could be sold of course proving an attraction. The chief objection, however, to them and which has led to their general abandonment, is that all cab tires are not of the same manufacture and quality. The scrap bought was of various makes and it was repeatedly found that while some of the segments remained quite sound, others rapidly wore out, giving the tire an uneven surface. There may possibly have been other disadvantages, because I don't see why it should be a difficult matter to get a lot of old tires of one make, especially if a good offer, as scrap prices go, was made for them. Though, as I have said, the days of these tires seem to be num-

bered, at their introduction they certainly caused a flutter of excitement among the makers of cab tires, as they were sold at considerably less than half the price of the latter.

WITH regard to this topic, referred to at length in our London contemporary, I am certainly in line with those who contend that if any disease is traced to the red rubber rings used in mineral water or beer bottles, it is due to the physical action of abraded particles, rather than to any specific toxic effect produced by the red sulphide of antimony. It is undeniable that these rings often remain in use longer than should be the case, and the oxidized rubber will easily break off and fall into the bottle. As such particles must be looked upon as decidedly dangerous in these days of appendicitis scares, the moral would seem to be that the rings should be regularly examined by those who fill the bottles and the worn ones replaced by new ones. In mentioning the harmlessness of red sulphide of antimony in this connection, I wish to be understood as referring to the pure product, containing pentasulphide of antimony, free sulphur, and sulphate of lime only. Such brands as contain the oxide of antimony in greater or less amount might easily prove dangerous and whatever may be considered desirable in the case of other red goods, it should certainly be stipulated that the antimony used for bottle rings or in connection with other food products should be quite free from the oxide.

ABOUT a year ago I said a few words regarding a preliminary prospectus issued by Messrs. Johnson & Phillips, electric cable manufacturers of Charlton, Kent. The capital then proposed was in the neighborhood of half a million. In the recent prospectus the more moderate sum of £350,000 is asked for, and the issue seems to have gone off all right. There has been an absence of the hostile criticism which the market directed against the first attempt, and the fact that the reduction in income of recent years is plainly stated has excited favorable comment. Moreover, there are now more debentures and less share capital than in the first proposition, a fact which has aided its more favorable reception. For a great many years the firm bought their rubber insulating material by contract from outside, but about four years ago they put down a rubber manufacturing plant of their own.—The recent flotation of Claudius Ash Sons & Co., Limited, at a capital of £1,000,000 sterling, went off, I understand, very well, being over subscribed for. Though the company has to a large extent a monopoly in the dental rubber and supplies business, the field is shared to some extent by the Dental Manufacturing Co., Limited, a concern founded a few years ago, and in which a large number of dentists up and down the country hold shares.

THE principal change which has come over the relations of the West African rubber merchant and the native collector is the substitution of currency payment for the old system of barter. Judging by what the merchants say they made much bigger profits in the good old days when the intrinsic value of the goods given in exchange for the rubber was but imperfectly known to the natives. The latter in now insisting on payment in coin even though they undertake to spend it at the merchants' stores are undoubtedly acting in their own interests and they can hardly be expected to consider the feelings of the

STATE  
OF TRADE.A PNEUMATIC TIRE  
DEVELOPMENT.NEW  
RUBBER SCRAP  
MACHINE.USES FOR  
OLD RUBBER.THE  
RED RUBBER  
SCARE.NEW  
FLOTATIONS.THE DECLINE  
OF BARTER.



merchant who bewails the altered condition of affairs. This barter system is of course closely allied to the truck system of payment to workmen which is now illegal in England and has seen a great reduction on the Continent in late years owing to agitation on the part of the work people. That it is open to great abuses in the case of illiterate and ignorant men admits of no doubt and those who advocate its continuance except in cases of very primitive civilization must excite suspicion as to the disinterestedness of their action.

In the June issue of THE INDIA RUBBER WORLD under the head of "Jottings by an American in Europe," some appreciative remarks are made in reference to the article

#### THE SWEDISH RUBBER TRADE.

I wrote last year on the rubber trade in Norway and Sweden. With regard to the surprise expressed at the accuracy of the article, there is a very simple explanation, and that is the willingness of those concerned to give the necessary information. My experience in other countries, and especially in my own, is that often it is an exceedingly difficult matter to get information at first hand. Manufacturers seem always interested to read what one has to say concerning the doings of their competitors, but their own springs of information show a decided tendency to run dry on the appearance of the interviewer. It was quite a revelation to me to find an opposite tendency in Scandinavia, and this rendered my self-imposed task an easy and pleasant one.

As an appeal has been entered against Mr. Justice Buckley, finding that the Haskell patent has been anticipated, comment

#### THE GOLF BALL TRIAL.

on the case ought to be suspended. Since the judicial finding a considerable reduction in the price of balls now sold at 2 shillings each has been freely talked about in golfing circles, but evidently such anticipations are somewhat premature. There seems little doubt that the present retail price leaves a handsome profit, judging from the cost price of the elastic thread and Gutta-percha, and the makers should be able to contemplate a reduction with equanimity, though probably not with approbation.

At some of the London workhouses the tasks allotted to casuals have been widened in their scope and it may be news to some to learn that one of the innovations is the separation of the insulation from narrow vulcanized rubber cables. A year or two ago the competition of prison made goods was strongly denounced in the house of commons. I am not suggesting that there is anything to be objected to in the workhouses going into the scrap rubber line, but the dealer who supplies the cable and gets the rubber back for sale seems to be a man of business, because in the ordinary way it has never been found profitable to strip the narrow cables by hand and the rubber has generally been burnt off.

THE June number of this Journal reprints from a Toronto contemporary some interesting remarks on the Canadian waterproof industry. Though there is nothing in the British references which requires correction, yet a few words by way of *addendum* seem called for. To the three Manchester waterproofing

firms mentioned as having done most of the early trade in Canada should be added S. L. Gotliffe & Co., who probably did the biggest business of any at one time. It is not surprising that since the evolution of the home manufacture in Canada the English firms have closed their offices, Frankenburg's being the last to take this step. This does not mean, however, that all business is stopped, because a considerable amount is still being done. This is more especially with single textures, in which the British make is superior to the Canadian. The

article referred to above says truthfully that the Canadian made proofing stands the climate better than the English make does. This applies especially to double textures, and I am told that the superiority consists in their being a good deal cheaper than the English, and because they contain the American pitch proof in place of rubber. It is considered in England that for cold climates this pitch proofing may be superior to a pure rubber proof, and this fact added to its lower price makes English competition quite impossible. Of course it must not be assumed that no business in this branch is done by other than the four Manchester firms whose names have been mentioned in connection; other firms have a share in it, but have not laid themselves out specially for the trade.

I SEE that in a recent patent of C. A. R. Steenstrup, hydrofluoric acid under pressure is one of the chemicals used. This has been proposed before, though I do not know whether it has been patented. I expect it will be found an objectionable substance to use, and I don't see how it can affect more in the way of destroying textile fabric than the cheaper mineral acids. Heinzlering's patent for dissolving vulcanized rubber in aniline or its higher homologues with the subsequent separation of the rubber free from mineral matter has now run out.

DR. SCHUMACHER, who for some years was chemist at Messrs. Charles Macintosh & Co.'s works and subsequently started the London Rubber Manufacturing Co. at Deptford, which closed down about a year ago, has recently commenced business as a rubber merchant as H. Schumacher & Co., at 40, Great Tower street, London, E. C.

## INDIA-RUBBER GOODS IN COMMERCE.

### EXPORTS FROM THE UNITED STATES.

OFFICIAL statement of values for May, 1905, and the first eleven months of five fiscal years, beginning July 1, from the treasury department at Washington:

MONTHS.	Belting, Packing, and Hose	Boots and Shoes.	All other Rubber.	TOTAL.
May.....	\$ 97,970	\$ 35,517	\$ 263,661	\$ 397,184
July-April.....	794,250	1,100,093	2,064,666	3,958,415
Total.....	\$892,232	\$1,135,610	\$2,327,757	\$4,355,599
Total, 1903-04....	802,985	1,045,192	2,242,130	4,090,307
Total, 1902-03....	753,236	1,006,982	2,075,925	3,836,143
Total, 1901-02....	578,572	981,058	1,607,448	3,167,078
Total, 1900-01....	508,873	684,256	1,584,864	2,777,993

### BRAZILIAN IMPORTS OF RUBBER GOODS.

OFFICIAL statement of values (in milreis) during two calendar years [These figures doubtless fail to include many articles embracing more or less rubber, but classified under other headings than "manufactures of rubber."]:

O R I G I N.			D I S T I N A T I O N.		
	1904.	1905.		1902.	1903.
Germany....	680,349	573,254	Manaus.....	48,925	77,640
United States	113,633	150,776	Pará.....	102,208	155,725
France.....	299,432	289,371	Pernambuco..	82,703	135,703
Great Britain	773,548	707,308	Bahia.....	82,125	89,728
Italy.....	127,952	189,872	Rio de Janeiro	1,109,855	1,244,261
All Other....	77,758	104,237	Santos.....	449,449	377,203
			Porto Alegre..	62,894	104,168
			Other Ports...	134,513	190,395
Total.....	2,072,672	2,374,823			

Total.....2,072,672 2,374,823

EQUIVALENT, with exchange at 12 pence, to:

	1902.	1903.
United States gold .....	\$502,332.92	\$573,913.81
sterling .....	103,633 12s.	£118,741 11s.

## NEW GOODS AND SPECIALTIES IN RUBBER.

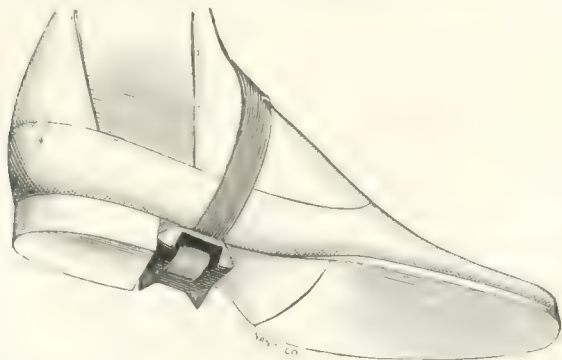
## THE BARKER MASSAGE MACHINE.

**M**ASSAGE appliances involving the use of rubber have come into very widespread use. Hitherto massage movements have been applied first by the hand alone, and more recently with the aid of devices used by the hand. The illustration herewith relates to a mechanical device intended to combine the stroking, kneading, and vibrating movements all in one, which the hand *masseur* cannot do. Besides which, the rate of movement attainable is very many times greater than is possible in hand massage. Again, by the use of the machines the treatment can be applied for any desired length of time, while at best the movements of the hand *masseur* cannot be maintained for more than a few minutes continuously. The cut herewith illustrates the rubber brush used and the wooden handle by means of which it is held and manipulated, the motion being given by means of a small electric motor (not included in the cut) which may be connected to an electric lighting or other similar current. This device was the subject of an award at the St. Louis Exposition in 1904 and has come into use in most of the cities in the United States, in large barber shops, massage parlors, and so on. [James Barker, Iron Foundry and Machine Works, Philadelphia.]



## A SERVICEABLE ICE CREEPER.

WHILE dealers in rubber and other boots and shoes are detailing their orders for the coming winter trade, it may be timely to consider also the various accessory goods, the number and variety of which is constantly increasing. The cut relates to and illustrates the application of an Ice Creeper which can be used

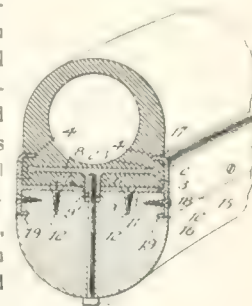


on rubber footwear of any style and also other boots and shoes. They can be put on or taken off instantly and with ease and are noiseless in use. There are no rivets or screws involved in their construction or application. The "Brattleboro" style is held in place with two rubber bands and the "Star" style with a leather strap. The metal points in these creepers are

referred to as being especially hard, which makes them more durable than any other article of this class in the market. [Dunham Brothers, selling agents for the United States, Brattleboro, Vermont.]

## A NEW TIRE FASTENING.

UNITED STATES patent No. 789 937 relates to means for attaching a pneumatic rubber tire to the wheel rim, as indicated in part by the accompanying illustration. The tire has its base formed with a T shaped embedded space, the radial part of which forms a bottom continuous slot; binder plates within said space, each plate having screw bosses projecting through such slot; a wheel rim; channel plates one of which has an integral web secured to said rim, the said screw bosses passing through and engaging said channel web; and screw bolts passing through the rim and engaging said bosses, whereby the binder plate and the channel web are secured together, to the rim, and to the tire. The patentee is George T. Reed, of Baltimore, Maryland.



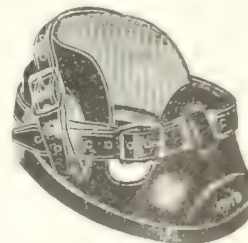
## DUFF'S RING GRIP FOR GOLF BOOTS.

THE Ring Grip illustrated in the accompanying cuts is designed for attachment by small screws to the soles of leather boots, for the use of golf players and other sportsmen. They may be attached to any boot or shoe, thus often rendering it unnecessary to purchase special footwear for sporting use. As a further development of the idea the makers have brought out a rubber golosh (shown in the illustration on the left) with a heavy sole to which the spring grips are fitted. This handy footgear is intended to be slipped over an ordinary walking boot, does not extend beyond the sole, and has no heel but is kept in its place by a strap which passes around the heel. A pair of these goloshes weighs but little, slips readily into the pocket, and can be almost instantly put on in case a sudden dash of rain renders the footing uncomfortable. [Duff & Co., 10, Throgmorton avenue, E. C., London.]



## THE "SURE FOOT" RUBBER HORSESHOE.

THE accompanying illustration relates not to a horseshoe pad merely, but to a horseshoe, every part of which is made of rubber except the straps and the buckles, which are of leather and metal. The shoe is intended to be worn over the ordinary steel shoe under certain circumstances, as for instance, on the street in slippery weather, or on lawns for the purpose of protecting them. But there are reasons at times why the shoe should be worn in place of the steel shoe, as for instance in case where the horse throws a shoe while driving, or the horse's hoof has been injured or is diseased. No nails or





irons are needed in keeping this shoe in place and it can be readily put on or taken off. The shoe is corrugated inside and can be applied to hoofs of different sizes by the adjustment of the straps. The bottom of the shoe is open for the purposes of ventilation, and to prevent the hoof from drawing and sweating. [The Mehlbach Saddle Co., No. 106 Chambers street, New York.]

#### THE "WEDGE LAP" ROBE FOR AUTOMOBILISTS.

AMONG the products of the extensive and long established robe manufacturers, L. C. Chase & Co. (New York and Chicago) there are now included a large list of robes designed to meet the requirements for wind, water, and dust proof covering, in weights, styles, and sizes especially adapted for automobile use. There are rubber robes, rubber interlined plush



robes, plush, leather, and linen dust robes, not to mention others, in the extensive catalogue of the firm name. The purpose of the present paragraph is to refer to the wedge shaped lap robe illustrated in an accompanying cut. This robe is made 80 inches long at the top and 65 inches at the bottom, which shape renders it well adapted for automobiles with wide seats and narrow body.

#### THE ARCTIC TONGUE SHIELD.

THIS is a small rubber article designed for the use of pipe smokers, for the purpose of breaking the direct stream of smoke on the tongue, making it cooler, and preventing it from biting the tongue. It is a small piece of soft rubber specially shaped and adapted to fit the mouthpiece of any pipe, rendering it soft and easy on the teeth. The article is intended to be retailed at 5 cents. [American Tongue Shield Co., No. 504 Ninth street, N. W., Washington, D. C.]

#### THE RUBBER GOODS PLAN.

TO THE EDITOR OF THE EVENING POST—*Sir*: Ought not shareholders of Rubber Goods Manufacturing Co. who have not accepted the Brady proposition to combine for mutual protection? If our company were to be wound up, that would mean par for the preferred, a stock which pays 7 per cent. dividends. What would it mean for the common, which we are told now can earn 8 per cent.?

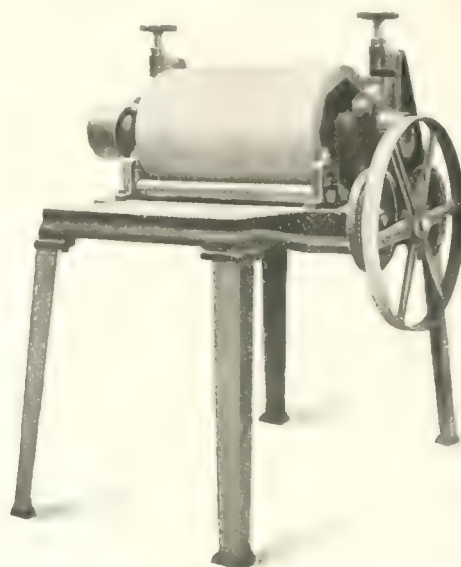
The management of our company in the past has been able but utterly selfish. It is not the United States Rubber Co. which should have been the first to inform us that we can earn not less and probably more than the sum of \$1,800,000 yearly. The last annual report of our company admits a net income of only \$981,186.66.

The mystery has remained impenetrable while speculators were accumulating our stock at low prices. They have now secured at least 60 for themselves, while depositing stockholders have received 50 per cent. only, in United States Rubber company second preferred stock.

A. HECKSCHER.

#### MACHINE FOR GRINDING RUBBER TILING.

A NEW machine designed for the grinding of either interlocking or sheet tiling of rubber is shown in the accompanying illustration. The necessity for grinding rubber tiling arises from the fact that the surface is apt to be slightly discolored by the preparation applied to the plates to keep it from sticking during vulcanization. The machine itself is quite simple, its salient feature being a large drum covered with emery or carborundum, held in place by glue, revolving at a speed from 1500 to 1800 revolutions a minute. The feeding is done by means of the friction of the grinding roll and the two



smaller rolls placed on the bed of the machine. The machine is made in two sizes, the larger taking tiling up to 4 feet in width and the smaller up to 2 feet and is adjustable for any thickness up to one inch. As tiling thickness usually varies from  $\frac{1}{8}$  to  $\frac{3}{8}$  of an inch it will be seen that there is ample clearance and adjustment for anything in that line. During operation very little is taken off by the grinding, the surface being left perfectly clean and absolutely even. Under ordinary conditions the goods are run through the machine but once, although in special cases they may be run through again and again without injury. This machine, which is now in use in some of the largest rubber factories in the United States, is manufactured by A. Adamson, Akron, Ohio.

#### BUKIT RAJAH RUBBER CO., LIMITED.

[See THE INDIA RUBBER WORLD, May 1, 1904, page 27.]

THE report presented at the second annual meeting of shareholders at the London office, on July 25, 1905, showed receipts for the first year of working of £8132 6s. 11d. [= \$39,576, gold] and expenditures on the plantation and in London of £8937 3s. [= \$39,112.80] leaving a balance of £95 3s. 11d., which was applied to writing off preliminary expenses. Sales of rubber included 5702 pounds of Pará at the average price in London of 5s. 9d., and 1009 pounds rambong (*Ficus elastica*) at 4s. 1d., average. There are now on the estate 138,589 rubber trees, of various plantings from 1897 down, and arrangements have been made to plant 200 acres with rubber this year. The manager estimates the rubber yield for the current business year at 25,000 pounds. Recent London quotations were £2 10d. and higher for full paid shares of £1 each.

## PROGRESS IN RUBBER PLANTING.

## REPORT OF THE MALAY STATES PLANTERS.

THE latest annual report of the United Planters' Association of the Federated Malay States devotes special attention to the cultivation of Pará rubber, which continues uppermost in the interest of the planters in that region. A favorable rate of growth is reported and the absence of pests and disease among trees. The year covered by the report was the first in which tapping had been done on a large scale, and the result was a better yield from the young trees than had been expected, and the prices realized equal to if not better than those for the finest of rubber from Ceylon. More new rubber estates were opened than in any former year and the extension of rubber acreage on the old estates was also larger. The total acreage planted with rubber in the Far East is estimated in the report as follows:

	Acres.
Federated Malay States and the remainder of the Malay peninsula.....	30,000
Sumatra.....	5,000
Java.....	5,000
Ceylon.....	25,000
India and Burma.....	5,000
Total.....	70,000

The report says: "We will take it for granted that this 70,000 acres is all good and that it will give a good yield of 200 pounds per acre = 14,000,000 pounds. This cannot all be in full bearing until the end of 1911, and no more than this 70,000 acres can be in bearing at the end of 1911 for it is not planted." In view of the growing demand for rubber, while the exports from Pará remain practically constant, the report takes the position that there is no reason to fear overproduction of rubber, since even the maximum output of Asia by 1911 would be hardly more than 10 per cent. of the present world's consumption. But even if rubber should be overproduced some day, it is felt that Brazil cannot compete with Asia with rubber at 2s. 6d. per pound, at which price Straits and Ceylon rubber can be sold at a profit.

While most of the rubber above referred to is *Hevea*, *ram-bong* (*Ficus elastica*) continues to receive increasing attention and favorable results are anticipated, though little rubber of this species has yet come into bearing. The amount of plantation rubber exported thus far from the Straits is not stated, but a much larger yield is expected this year, owing to more trees now being ready for tapping.

## "CASTILLOA ELASTICA" IN THE DUTCH EAST INDIES.

EXPERIMENTAL planting of various rubber species has been carried on for some time by the forestry department in the Dutch East Indies, and particularly in Java. *De Indische Mercuur* contains a résumé of the progress made, derived mainly from the latest annual report of the forestry department. It appears that total area planted with Caoutchouc yielding species under the auspices of the department to the end of March 1904, was 2476 hectares [=6118 acres], of which 992 hectares had been planted after January 1, 1903. The average per acre is small as compared with planting statistics in other localities, but this is due to the fact probably that the greater part is planted has been of *Ficus*, which requires more space than some other species. The number of young trees mentioned as having been planted is as follows: *Ficus elastica*, 317,000; *Hevea Brasiliensis*, 32,000; and *Castilloa elastica*, 36,000; total 385,000. Regarding *Castilloa* the report says that the condi-

tions of cultivation are favorable in many places, although in Japara many of the plants died when young, owing to the lack of experience of the planters. In the same district the plants suffered two years ago from severe storms. Given good soil and clean cultivation and a sufficient amount of light, the tree is reported to develop splendidly. In some localities a fungus appearing at the roots has caused the entire plant to dry out, though a small proportion of the trees appears to have been affected. At Genggeng some 10 year old *Castilloas* were reported to have died after the appearance of numerous small larvæ (*Bostrichidæ*). This may have been a secondary cause, however, the real trouble perhaps being in an unfavorable location and soil. In Bodja the *Castilloa* was not injured by the porcupines, while the *Hevea* plants growing nearby suffered great damage from them.

## SAN GABRIEL CO.

[Plantation at San Gabriel, near Playa Vicente, state of Vera Cruz, Mexico. Office: No. 189 La Salle street, Chicago, Illinois.]

INCORPORATED November 3, 1903, under Illinois laws, to acquire the "San Gabriel" sugar plantation, which had been developed by several citizens of Chicago for five or six years. They have 2650 acres near where the Vera Cruz and Pacific railway crosses the rio Tesechoacan. There are now on the estate some 4000 rubber trees which have grown so well that, while sugar planting will continue to be the chief interest of the company, they advise THE INDIA RUBBER WORLD: "We will each year put out some rubber, doing the work slowly and carefully taking advantage of the experience of other rubber planters and not looking for returns for say perhaps 8 or 10 years. Some may think we are a little too conservative, but we believe it is best to be on the safe side." Officers: Elmer J. Adams, president; Chesley R. Perry, vice president; Robert J. Kerr, secretary and treasurer.

## GOOD RUBBER LANDS IN TABASCO (MEXICO).

TO THE EDITOR OF THE INDIA RUBBER WORLD: As a subscriber to your paper I beg to draw your attention and of all those who are interested in rubber culture to a certain part of the state of Tabasco, till now completely neglected, but which contains the finest lands imaginable for the culture of the *Castilloa elastica*. It is on the right bank of the Mezcalapa river, in the southern part of the state, and includes all the lands between the boundary of this state and the foothills of the mountains of the state of Chiapas. Thousands of wild rubber trees growing in this section are annually tapped by the natives, who, employing their destructive methods, kill or injure many trees. However, their number does not decrease, but on the contrary it seems to augment.

American capital has not invaded this territory, probably because it has few and bad roads, and hence has seldom been visited. Still the success obtainable in any kind of culture depends greatly upon the soil, and if there is any part of the state of Tabasco suitable for rubber culture, nature's finger points to this tract of land. It is about 150-200 feet above sea level, hilly, and well drained. Transport facilities are limited, and while this is a drawback for any plantation, it is not so much so for rubber culture. The lands I am specially referring to can be reached in the rainy season by water from San Juan Bantista, but in the dry season a trip of about 40 miles over land must be made to get to them.

WILLIAM C. DE WIT.

Cardenas, Tabasco, Mexico, March 14, 1905.



## RECENT RUBBER PATENTS.

## UNITED STATES OF AMERICA.

ISSUED MAY 30, 1905.

**NO. 790,906.** Tubular flexible article [tire cover or the like]. **A. H. Marks, Akron, Ohio.**

790,907. Method of constructing tubular flexible articles. *Same.*

790,914. Tire protector. **H. P. Palin, North Attleboro, Mass.**

790,954. Golf ball. **C. Davis, Washington, D. C., assignor to Cambridge Mfg. Co., Wilmington, Del.**

790,955. Golf ball. *Same.*

790,971. Flexible tube and connection. **A. W. Nicholls, Chicago, Ill., assignor of one-half to F. P. Noera, Waterbury, Conn.**

791,075. Pneumatic attachment for riveting and plate closing machines. **H. A. Carpenter, Sewickley, Pa., assignor to Riter-Conley Mfg. Co., Jersey City, N. J.**

791,100. Waterproof explosive cap for blasting purposes. **E. W. Keith, Denver, and A. H. Boyd, Leadville, Colo.**

791,345. Tire repairing device. **O. F. Kadow, Cleveland, Ohio.**

791,377. Stork neck for gas tubes. **W. S. Stapley, Bridgeport, Conn., assignor to The Bridgeport Brass Co.**

## Trade Marks.

651. Pneumatic and rubber tires. **C. L. Ireson, Boston. Essential feature.**—The hyphenated letters I-C.

790. Rubber bath and flesh brushes, rubber complexion brushes, and rubber tooth and toilet brushes. **C. J. Bailey, Boston. Essential feature.**—The word BAILEY'S.

1715. Packing. **S. R. Dresser, Bradford, Pa. Essential feature.**—The representation of a cap inclosed in an elliptical frame. Above the cap appear the letters S. R. DRESSER'S and below the cap the letters CAP RUBBER.

1724. Rubber boots and shoes. **T. Crowley, Lambertville, N. J. Essential feature.**—The word TUNNEL associated with the pictorial representation of a crossed pick and shovel and a miner's cap and lamp.

ISSUED JUNE 6, 1905.

791,552. Gasket material. [Wire mesh and rubber.] **R. C. Hance, Holmes, Wyo.**

791,563. Rubber dam holder [for dentists' use]. **R. F. Ludwig, Chicago.**



791,592.

791,592. Rubber tire. **J. A. Swinehart, Akron, Ohio.**

791,648. Apparatus for making golf balls. **F. H. Richards, Hartford, Conn.**

791,649. Apparatus for molding playing balls. *Same.*

791,690. Comb. **F. W. Grell, New York city, assignor to American Hard Rubber Co.**

791,705. Hose coupling. **A. B. Lees, Great Barrington, Mass.**

791,774. Form for making seamless rubber articles. **T. M. Gregory, Akron, Ohio, assignor to The Miller Rubber Mfg. Co. [Described elsewhere in this paper.]**

791,787. Pneumatic breast strap [for horses]. **C. T. Howard, Rosedale, Kans., assignor of one-half to J. O. McVey, Kansas City, Mo.**

791,788. Pneumatic horse collar. *Same.*

791,946. Apparatus for casting playing balls. **F. H. Richards, Hartford, Conn.**

791,991. Rubber tire fastener for wheels. **G. T. Reed, assignor of one-third to A. H. Beimschla, both of Baltimore.**



791,991.

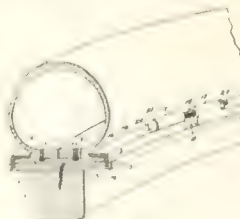
2,515. Atomizers and bulb and fountain syringes. **The S. H. Wetmore Co., New York city. Essential feature.**—The word CENTURY.

2,650. Dress shields and protectors. **The Canfield Rubber Co., Bridgeport, Conn. Essential feature.**—The representation of a peacock with its tail extended in fan shape and the representation of a dress shield immediately on and concealing part of the tail.

2,651. Dress shields and protectors. *Same. Essential feature.*—The representation of a peacock perched on the concave edge of a dress shield with the tail of the peacock extending in front of and to a point below the convex edge of the shield.

ISSUED JUNE 13, 1905.

792,008. Pneumatic tire. **P. E. Doolittle, Toronto, Canada.**



792,008.



792,009.



792,074.

792,009. Tool for applying clincher tire casings to clincher rims. **E. N. Downs, Chicago.**

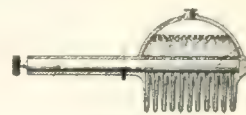
792,074. Hose coupling for hydrants. **G. Rathburn, Peoria, Ill.**

792,075. Vehicle tire. **J. C. Raymond, New York city.**

792,124. Fountain comb. **W. H. Evans, Monticello, Ill.**

792,130. Toy. **P. Heftler, assignor to E. Storch, both of Vienna, Austria.**

792,198. Vulcanizing mold [for forming rubber hose and tubing in long lengths.] **H. Z. Cobb, Wilmington, Del.**



792,124.

792,206. Pyrograph. **W. H. Figg, Washington, D. C.**

792,227. Fireman's respirator. **W. F. Merryman, assignor of one-half to H. R. Wolcott, both of Denver, Colo.**

792,230. Hot air inhaler. **N. K. Morris, Denver, Colo.**

792,278. Bath brush. **P. J. McCarthy, Providence, R. I.**

792,290. Pneumatic tire. **C. S. Sears, Toledo, Ohio.**

792,299. Syringe [for dentists' use]. **S. M. Weaver, Cleveland, Ohio.**

792,348. Oxygen inflating device. **T. P. Pomeroy, Freeport, Mich.**

792,417. Hose or pipe coupling. **W. S. Houser, Dubois, Pa.**

792,555. Elastic tread. **P. W. Pratt, Boston.**

## Trade Marks.

2,799. Rubber heels for ladies' boots and shoes. **A. E. Little & Co., Lynn, Mass. Essential feature.**—The word SOROSIS inclosed in a circle.

2,859. Rubber belting. **Gibbens & Stream, New Orleans, La. Essential feature.**—The representation of a mosquito, associated with the word MOSQUITO.

ISSUED JUNE, 20, 1905.

792,626. Hose coupling. **J. H. Stephens, Vernon, Tex.**



792,626.

792,673. Grip tread for pneumatic tires. **W. J. Smith, assignor to L. G. Fischer, both of Canastota, N. Y.**

792,688. Cushion for shoes. **E. J. Bliss, Edgartown, Mass., assignor to Tredair Rubber Co., Boston.**

792,766. Tire for vehicle wheels. **W. F. Ellis, Stamford, Conn., and E. C. Davis, New Brunswick, N. J., assignors to The Universal Tire Co., New York city.**

792,767. Tire construction. *Same.*

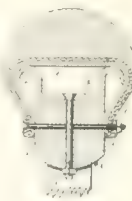
792,844. Brake for rubber-tired vehicles. **E. Perron and W. A. Sawyer, Rockland, Mich.**

792,897. Vehicle wheel [with resilient tire comprising a series of springs and a rubber tread]. **L. A. Hill, Washington, D. C.**

792,898. Fountain pen. **S. H. Hodges, South Glens Falls, N. Y.**

792,921. Resilient tired wheel. **J. Partington, Saltaire, England.**

792,988. Fountain pen. **S. H. Hodges, South Glens Falls, N. Y.**



792,898.

## Trade Marks.

758. Insulating varnishes and compounds for insulating purposes. **Standard Varnish Works, New York city. Essential feature.**—The word VO-TALAC, inclosed within a diamond shaped figure.

4,123. Insulating compound. **Standard Underground Cable Co., Pittsburgh. Essential feature.**—The word OZITE

[Note.—Printed copies of specifications of United States patents may be obtained from THE INDIA RUBBER WORLD office at 10 cents each, postpaid.]

## GREAT BRITAIN AND IRELAND.

## PATENT SPECIFICATIONS PUBLISHED.

The number given is that assigned to the Patent at the filing of the Application, which in the case of those listed below was in 1904.

\* Denotes Patents for American Inventions.

[ABSTRACTED IN THE OFFICIAL JOURNAL, MAY 24, 1905.]

- \*2493 (1904). Elastic cushion for the inside of boot heels. E. J. Bliss, Edgartown, Massachusetts.
- 2605 (1904). Heel protector. M. Simpson, Johannesburg, Transvaal.
- [ABSTRACTED IN THE OFFICIAL JOURNAL, MAY 31, 1905.]
- 2816 (1904). Golf ball [with sponge rubber core enveloping a center of various materials]. G. V. de Luca, London.
- 2982 (1904). Tire preserving mixture [of birch tar oil, coal tar benzine, and dissolved dextrine]. L. Lessmann and M. Weinkopf, Graz, Germany.
- \*2997 (1904). Dental vulcanizer. J. F. Funck, Rochester, New York.
- 3088 (1904). Method of combining rubber and metal for tire threads, hose pipe, and the like. J. A. Mays, Hampstead, Middlesex.
- \*3121 (1904). Fountain pen filler. L. Fisk, Woodcliff, New Jersey.
- \*3213 (1904). Conduit for electric conductors. H. H. Lake, London. (J. S. Wilson, Chelsea, Massachusetts.)
- \*3261 (1904). Valve for railway air brakes. British Thomson-Houston Co., London. (General Electric Co., Schenectady, New York.)
- 3203 (1904). Leather cover for pneumatic tires. E. Niederhäuser, Cologne, Germany.
- 3347 (1904). Heel protector. R. M. Howison, London.
- 3362 (1904). Flexible metallic tread for pneumatic tires. C. A. Brackelsberg, Düsseldorf, Germany.
- 3406 (1904). Rubber lined frames for packing earthenware, glass, and the like for shipment. H. Hobson, Longton, Staffordshire.
- 3410 (1904). Pneumatic tire [with leather protected cover]. S. Cooper, Milngavie, near Glasgow.

[ABSTRACTED IN THE OFFICIAL JOURNAL, JUNE 7, 1905.]

- 3224 (1904). Means of securing pneumatic tires to wooden rims. A. T. Collier, W. G. Williams, and Collier Tyre Co., London.
- \*3458 (1904). Rubber type and holders therefor. Addressograph, Ltd., London. (Addressograph Co., Chicago, Illinois.)
- \*3506 (1904). Fountain pen. W. Bolles and J. L. Chase, Toledo, Ohio.
- 3530 (1904). Carpet cleaning apparatus. S. Simmons and H. Dansey, London.
- 3591 (1904). Method of securing rubber soles to leather boots. W. A. C. Matthews, New Dustan, Northamptonshire.
- 3601 (1904). Douche. F. Schutze, London.
- 3670 (1904). Tire inflator. B. L. J. Tollemache, Cirencester.
- 3749 (1904). Waterproof cape [stiffened at the edge by wires, to cause the rain to drip away from the wearer]. H. Brown, Winchfield, Hampshire.
- 3907 (1904). Pneumatic tire [with protected cover of short chains]. Count Siegfried, Wimpfen, Vienna, Austria.

[ABSTRACTED IN THE OFFICIAL JOURNAL, JUNE 15, 1905.]

- 4017 (1904). Heel protector. J. R. Skinner, Christchurch, New Zealand.
- 4132 (1904). Pneumatic tire. E. Lee, Gosport.
- 4200 (1904). Vulcanizer for tire repairs. H. H. Frost, London.
- 4305 (1904). Antiskidding device for tires. Sainsbury's Anti-Skidders, Ltd., and J. Badger, London.
- 4351 (1904). Hose coupling. D. Worland, Victoria, Australia.
- 4353 (1904). Massage appliance. T. Hoffman, Berlin, Germany.
- 4354 (1904). Pneumatic boot. [A rubber air cushion is inserted between the insole and the outer sole.] L. Dewanne, Nirvelles, Belgium.

[ABSTRACTED IN THE OFFICIAL JOURNAL, JUNE 21, 1905.]

- 4612 (1904). Inflatable toys. P. Heftler and E. Storch, Vienna, Austria.
- 4616 (1904). Inner tube for tires. F. Rich, Crawley, Sussex.
- 4623 (1904). Pneumatic tire. A. van der Stichelin, Ghent, Belgium.
- 4635 (1904). Surgical truss. A. D. Bateman, Manchester.
- 4744 (1904). Anti skidding device for tires. A. G. Rosser, London.
- 4933 (1904). Roller skates with pneumatic tires. E. Theysohn, Pirmasens, Bavaria.
- 4960 (1904). Golf ball. R. Appleyard, India-rubber, Gutta-Percha, and Telegraph Works, Silvertown.

4987 (1904). Enema syringe. H. Lambert, London.

\*5014 (1904). Pneumatic tire [rendered puncture proof by metallic shield]. M. Miller and J. A. Bunnell, Clyman, Wisconsin.

5063 (1904). Heel protector [having its wearing surface composed of independent parts, each of which may be removed and replaced by others when worn]. T. T. Spencer, London.

[ABSTRACTED IN THE OFFICIAL JOURNAL, JUNE 27, 1905.]

- 5265 (1904). Nipple and stopper for nursing bottle. E. W. Harrison and T. Webb, St. Helens.
- 5287 (1904). Elastic tire. A. Spencer, London.
- 5314 (1904). Pneumatic tire [with protective tread]. P. T. Somerville-Large, Kilcullen, County Kildare.
- 5345 (1904). Pneumatic tire [with spoon shaped shield]. J. Hardie and F. H. Cooper, Erith, Kent.
- \*5359 (1904). Printers' blanket. J. E. Rhodes, Brooklyn, New York.
- \*5365 (1904). Mud guard for tires. W. Lintern, Westpark, Ohio.
- 5615 (1904). Pneumatic tire [protected from puncture by metal shields]. F. Schmidt, Itchen, and C. Sharp, Woolston, Hampshire.
- 5643 (1904). Heel protector. C. P. Horton, Birmingham.
- 5686 (1904). Pneumatic tire [with puncture preventing bands of steel wire loops]. F. H. Richardson, Sunderland, Durham.
- 5687 (1904). Inflatable life saving belt. E. Manco-Schnurer, Paris, France.
- \*5721 (1904). Pneumatic tire [protected against puncture by cork lining of the tread]. M. van B. Rush, Anderson, Indiana.
- 5756 (1904). Pneumatic tire [with anti skidding device]. T. Stewart, Bolness, Lidlithgowshire.
- 5810 (1904). Rubber and metal tread [for heel pads, horseshoes, stair treads, and the like]. W. S. Cort and G. L. Porter, Market Harborough.
- 5827 (1904). Leather cover for pneumatic tires. M. Korth, Cologne, Germany.
- 5830 (1904). Elastic tire. E. C. F. Otto, London.
- 5833 (1904). Fountain pen filler. Bewley & Draper and H. C. Draper, Dublin.
- 5858 (1904). Pneumatic toy. T. Dowler, Manchester.

## THE FRENCH REPUBLIC.

## PATENTS ISSUED (WITH DATES OF APPLICATION).

- 349,406 (Dec. 16, 1904). Guerry and Duperay. Impervious cotton cloth covering for pneumatic fittings.
- 349,420 (Dec. 22). E. Lafosse and F. Daligault. Tires with anti skidding device.
- 349,475 (Dec. 7). H. Stein. Shoes with invisible elastics.
- 349,481 (Dec. 14). J. J. Collet. Composition for pneumatic tires.
- 349,488 (Dec. 22). L. Fougadoire. Rubber for enlarging and reducing drawings used in pantograph machines.
- 349,501 (Dec. 23). Rousset Freres. Shoes with rubber soles pasted over leather soles.
- 349,503 (Dec. 23). Michelin & Cie. Process and device for inflating pneumatic automobile tires.
- 349,527 (March 31). C. E. Giovetti, Grundler and Haberer. Process and device for the extraction of sap, latex, and all liquids from trees of all kinds, and especially from those producing Caoutchouc and Gutta-percha.
- 349,561 (Dec. 27). F. E. Bowers. Protective covering for rubber tires.
- 349,615 (Dec. 27). J. E. Hopkinson. Elastic tires.
- 349,646 (Dec. 28). A. Boucher. Rubber tire protector.
- 349,801 (Dec. 31). M. C. A. Lapsolu. Pneumatic tire with articulated metallic covering.
- 349,812 (April 12). A. E. Vincent. Machine for the manufacture of pneumatic tires.
- 350,557 (Jan. 6, 1905). J. Oliver. Leather and rubber tire for vehicle wheels.
- 350,561 (Jan. 6). P. W. Litchfield. Pneumatic tire.
- 350,702 (Jan. 11). P. J. Schmitz. Heel with rubber insertions for gaiters.
- 350,716 (Jan. 12). A. Chaurion. Non skidding seamless leather pneumatic tire.
- 350,754 (Jan. 14). A. Bisse and E. Auranje. Detachable rubber saddle pads for horses.

[NOTE.—Printed copies of specifications of French patents may be obtained from R. Bobet, Ingenieur-Counsel, 16 avenue de Villiers, Paris, at 50 cents each, post paid.]



## THE GERMAN EMPIRE.

## PATENTS GRANTED

- 161,709 (Class 47*d*). Method of making waterproof cords. Vereinigte Gummwaren Fabriken, Hildesheim-Wien. May 24.  
 161,710 (Cl. 54*d*). Attachment for envelope making machine. G. Lengner, Berlin. May 24.  
 161,750 (Cl. 63*e*). Tire inner tube with textile reinforcement. E. Lange, Gotha. May 24.  
 161,769 (Cl. 64*b*). Preserve jar ring. J. Weck, Offingen, Baden. May 24.  
 161,885 (Cl. 63*b*). Elastic tire. The Resilient Hub Syndicate, Ltd., London. May 31.  
 161,886 (Cl. 63*e*). Tire composed of connected elastic rings. V. Guedry, Paris. May 31.  
 162,033 (Cl. 63*e*). Tire fastening device. F. K. Wiessier and others. Dresden. June 7.  
 162,147 (Cl. 63*e*). Tire with cross ribs on the tread. L. P. Faison-Golconda. June 15.  
 162,130 (Cl. 63*e*). Process for making pneumatic tires. T. Birtwistle, Pendleton, England. June 15.  
 162,376 (Cl. 39*a*). Machine for cutting hard rubber stoppers. E. Rouge, Frankfurt o/M. June 15.  
 162,264 (Cl. 63*e*). Fastening device for covers of motor cars. K. Lehman, Wilmersdorf. June 15.  
 162,383 (Cl. 63*e*). Tire inner tube. F. Veith, Odenwald. June 15.  
 161,832 (Cl. 34*g*). Elastic bottom for beds. H. Westphal, Berlin. May 31.

## DESIGN PATENTS GRANTED [GEBRAUCHSMUSTER]

- 250,668 (Class 30*e*). Air cushion for invalids. Frau M. Frickmann, Hildesheim. May 24.  
 250,769 (Cl. 30*g*). Nipple for nursing bottle. F. Wenzel, Kenditz. May 24.  
 249,544 (Cl. 63*e*). Anti skidding tire cover. R. Hauschild, Schandau. May 24.  
 250,800 (Cl. 63*e*). Anti skidding motor tire. K. Horneck, Frankfurt o/M. May 24.  
 250,331 (Cl. 64*a*). Bottle stopper. Metzeler & Co., Munich. May 24.  
 250,566 (Cl. 65*a*). Life saving belt. Friedman and Hollander, Paterson. May 24.  
 250,602 (Cl. 71*a*). Heel protector. I. Reizck, Craig. May 24.  
 250,707 (Cl. 77*a*). Exercising apparatus. Wilhelm Anhalt G.m.b.H., Kolberg. May 24.  
 250,744 (Cl. 77*e*). Football bladder. Vereinigte Gummiwaren-Fabriken, Harburg-Wien. May 24.  
 251,498 (Cl. 30*g*). Nipple for nursing bottle. F. Wenzel, Schkenditz. May 31.  
 250,946 (Cl. 34*e*). Pneumatic ball for cleaning glasses. M. Binger. May 31.  
 251,429 (Cl. 63*e*). Rubber protector for motor tires. Continental Caoutchouc and Guttapercha Co., Hanover. May 31.  
 251,108 (Cl. 70*b*). Fountain pen. Columbus Werke, Furth. May 31.  
 251,715 (Cl. 21*e*). Metal tubes lined and joined with vulcanized rubber. Dr. H. Traun & Sohne, Hamburg. June 7.  
 251,810 (Cl. 30*h*). Dental plate with elastic edge. E. Phelen, Düsseldorf. June 7.  
 252,015 (Cl. 63*e*). Solid tire with retaining wire inside. M. Pollack, Waltershausen. June 7.  
 252,874 (Cl. 63*e*). Tire inflator. G. Leitner & Co., Berlin. June 16.  
 252,253 (Cl. 77*a*). Gymnastic apparatus. Wilhelm Anhalt G.m.b.H., Kolberg. June 15.  
 252,907 (Cl. 77*a*). Gymnastic apparatus. *Same*. June 21.

## PATENTS APPLIED FOR.

- 38,153 (Class 69). Button for bayonets. S. C. Brons, Amsterdam. May 10.  
 20,304 (Cl. 64*b*). Elastic connection for racking sparkling liquids. G. Guzewsky, Berlin. May 10.  
 22,739 (Cl. 63*e*). Tire protector. R. and C. H. Wallwork, Manchester, England. May 17.  
 18,898 (Cl. 63*e*). Solid rubber tire. James A. Swinehart, Akron, United States. April 19.  
 9,558 (Cl. 63*e*). Elastic tire. Charles Henry John Chetwynd Talbot, Earl of Shrewsbury and Talbot, London, England. April 19.  
 27,452 (Cl. 63*e*). Pneumatic tire protector. W. Kaulhausen, Aix la Chapelle.

## COMBINATION OF RUBBER AND METAL.

LETTERS patent issued at Washington (No. 793,181—June 27, 1905) relate to a composition of matter, whereby rubber is combined with fibers of metallic wool and the whole vulcanized. The object is to secure greater durability in tire treads, boot heels, and other articles in which resistance to wear is desirable, while retaining the elasticity and pliability of rubber. The proportions of rubber and metallic fiber may be varied, according to whether the composition is required for heels, tires, or other uses; the metallic fibers may be distributed uniformly through the mass, or so arranged as to form layers embedded in the rubber. The latter arrangement is referred to as particularly desirable in pneumatic tires, as a protection against puncturing.

One method of effecting the combination is by placing the metallic fibers in a mold and pouring rubber solution over them. Although the article known commercially as "steel wool" is at present the only commercial commodity which the patentee finds feasible for carrying out his invention, he does not limit his claim to that specific material, inasmuch as any metallic elongated fiber will answer the purpose so long as it possesses the qualities of tensile strength and elasticity and is of a crumpled character or form like the fibers of steel wool. The inventor is James P. Crane, Chicago manager of the Franklin Life Insurance Co.

[Mineral cotton is a fiber formed by allowing a jet of steam to escape through a stream of liquid slag by which the slag is blown into fine white thread. It is a poor conductor of heat and is, therefore, suggested as a covering for steam boilers and pipes. A variety with short fiber is called mineral wool and is used as a non conductor of heat, or a deafening for floors.]

## FORM FOR SEAMLESS RUBBER GOODS.

IN the specification of United States patent No. 791,774, relating to a form for making seamless rubber articles, the inventor, Thomas M. Gregory (Akron, Ohio), refers to the liability of hot water bottles, syringe bags, and the like to develop leaks where the edges of the parts constituting the articles are joined together to complete the manufacture. The object of the new invention, therefore, is to provide forms for the manufacture of hollow rubber articles by dipping into rubber solution, which forms may be removed after the completion of the bottle or bag, leaving the latter entirely without seams and therefore of equal strength at every point. Such removal of the form requires its destruction, so that only a single use of the form is possible; but the invention does not require expensive material or expensive labor in the manufacture of the form, and a paper pulp or a suitable grade of paper stretched upon an edging or border frame, say of laminated paper glued together and thus made temporarily rigid, will suffice, though the inventor does not limit himself to any special material or manner of getting the same out of the bottle or bag. The patentee refers to the use of shellac on the outer surface of the paper form, or other treatment, to give a smooth finish which the rubber cement does not penetrate and upon which it will adhere and make an even unbroken deposit.

WHEN WILL THAT BE?—The *Durango Democrat* says that the Rocky Mountain Crude Rubber and Development Co. is a fake. It is to be supposed that when this company, which is composed of some of Salida's representative men, begin to turn out the crude rubber the editor of the *Democrat* will be convinced that it is not a fake.—*Salida (Colorado) Record*, May 26

# GOODRICH RUBBER GOODS AWARDED



## GRAND PRIZE HIGHEST AWARD



# NEW YORK BELTING *and* PACKING Co., Ltd.

Manufacturers of the highest grades of  
**ALL KINDS OF HOSE**

✎ INCLUDING ✎

Air Brake, Air Drill, Brewers', Car Heating, Dredging Sleeves  
 Engine and Tender, Fire, Garden, Gas, Linen, Mill, Pneumatic Tool  
 Signal, Steam, Suction and Water Hose

Also a complete line of fine Mechanical Rubber Goods

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## RUBBER BELTING.

"SHIELD HIGH GRADE" BRAND.

Every foot guaranteed  
 in strongest possible  
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We make everything in rubber.



Our warrant is indelibly  
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 to protect the user.

Write for catalog and prices.

**THE MECHANICAL RUBBER COMPANY,**  
 CLEVELAND, OHIO.

## SUMMER OUTING OF THE NEW ENGLAND RUBBER CLUB.

*(Boston, July 12, 1905.)*

## THE BALLAD OF THE RUBBER CLUB OUTING.

THEY started off in autos from before Hotel Touraine, with golf clubs for umbrellas, because it threatened rain. In the "sight-seeing" autos they left the sweltering Hub, up hill and down through Brookline town they sought the Country Club.

and when the catcher missed the ball just stopped it with his chest. When Stedman laboring down from "first" stopped to embrace Fred Hood, he called him "out" on second base, as any umpire would. Then when Ben Pearson slid ten yards and knocked third base away, he got a tub and filled it up and put it there to stay. The players then approaching "third" came



Upon the broad piazza some sat to chat and smoke, while Taft strolled round and told each one the last insurance joke. The thirsty ones hurried within and crowded side by side, big lemonades, cold "horse's necks," and other liquids tried. Then golfers started o'er the links to play their handicaps, in swinging "drive," subdued "approach," and gentle "putting" taps. The "minor sports" fell very flat, due partly to the rain. (A bit more ginger needed there, to put the matter plain.)

Between two showers a photograph of all the crowd "at ease," was taken, helped by this remark: "Now all look pleashant pleath." Recorder Putnam striding round with kodak panoram, wished that he might effectually the falling water dam.

The special feature of the day then came, the game of ball, between the Manufacturers and "Crude" Importers all. Andrews (Columbus), umpire, passed on each important play; when Kelley kicked or Barker bluffed he took his own sweet way. He held them to Ohio rules and made them play their best,

with exceeding care, for bottles lying in the ice furnished refreshment there.

There were scores of funny errors, yet good plays for all of that, you should see "Zacualpa" Farrington take hot pitching off the bat. Good work was done by Balderston, by Chipman, and by Paine, and the nines played out five innings in spite of dripping rain. The score at the finish stood eleven to twenty-two; the Importers got the best end as folks say they always do. Then they gathered all for dinner, marching in one hundred strong, and they ate, and drank, and jollied, bursting often into song. The dinner was a daisy, both in service and *cuisine*. (That's a French word; better skip it if you don't know what I mean.)

To appreciate good music you never will, nor can, till you hear Bill Barker carolling "A Bold Bad Man." And when Bill Kelly joins him in a megaphonic bass, you can hear the ear-drums bursting all about the blessed place. A speech by Mr.



Arthur Reeve was sandwiched in just here, 'twas mighty well delivered but the words we couldn't hear. Then the prizes were awarded for golf, both gross and net; how the "minor sportsmen" earned their gifts the boys are wondering yet. Then came a rising vote of thanks, given with hearty cheers: "To the members of the Country Club, kind hosts for many years!"

#### THE BALL GAME.

THE base ball game between the Manufacturers and Importers, resulting in a score of 22-11 in favor of the latter, was, as reflected in the score, a brilliant five inning effort. The players, their positions, and the runs scored, were as follows:

MANUFACTURERS	IMPORTERS
Balderson, 3b..... 1	Chipman, 2b..... 2
Pearson, 1b..... 3	Stedman, s..... 1
Estey, c..... 3	Paine, 1b..... 4
Barker, p..... 1	Kiley, p..... 3
Phipps, s..... 1	Farrington, c..... 5
Allen, c..... 0	Thomas, 3b..... 4
Stevens, lf..... 1	Kelley, c..... 1
Rice, cf..... 0	Dunbar, lf..... 1
Hood, 2b..... 1	Currier, rf..... 1
Total..... 11	Total..... 22

#### THE GOLF PRIZES.

CLASS A.—Best net, R. E. Payne, silver tankard. Best gross, F. C. Hood; second best net, F. D. Balderston; second best gross, H. C. Mason—each one dozen golf balls.

CLASS B.—Best net, William J. Kelley, silver pitcher; second best net, G. E. Habich, one dozen golf balls.

GUESTS' PRIZE.—Best net, M. V. Bouve, cigar jar.

The prizes for minor sports, which were small souvenirs intended to appeal to the humorous side of those present, were awarded to President John H. Flint, Treasurer George P. Whitmore, Secretary Henry C. Pearson, Umpire Andrews, W. M. Farwell, P. L. Rider, Harry Jones, R. S. Johnson, and Charles H. Arnold.

#### FROM THE REPORTER'S NOTES.

HONORARY VICE PRESIDENT L. D. APSLEY, knocked out by the hot weather, sent word at the last minute that he could not attend.

Assistant Secretary E. E. Wadbrook, who did so much to make the outing a success, fled from Boston a few days before the dinner to escape from hay fever, and so missed seeing the fruition of his labors.

The *chef* of the Country Club achieved a great success both

in the creation and in the serving of the dinner. It was by far the best in those particulars that the New England Rubber Club has ever had. Ices were served in tiny flower pots, from the middle of each of which sprung a miniature rubber plant of the *Ficus elastica* sort.

Music for the afternoon and evening was furnished by the full military band of the Lynn Cadets and was excellent.

All of the officers wore badges upon which the name of the office held was printed in gold letters—that is, they wore them until Benjamin Taft began to quietly lift them and decorate Mr. Henry C. Morse with them. In the end he fairly glittered with adornment, looking like a Russian admiral.

One of the members of the Club, Dr. Joseph C. Stedman, is the composer of a popular air known as the "Coast Artillery March," which was played by the band during the dinner and evoked much appreciative applause.

William J. Kelley put in a most strenuous day, visiting his old time customers in the forenoon, playing golf and base ball in the afternoon, and eating and singing with great gusto in the evening.

Dr. Alberto Pirelli, of Milan, Italy, who hoped to be present, wired from Niagara Falls his regrets at being unable to reach Boston in time for the dinner.

Before the ball game Fred T. Ryder and E. L. Phipps knocked up flies for fifteen minutes to limber up the fielders. Both showed that they were good ball players.

H. E. Kiley who pitched for the "Importers" team, and who did fine work, is one of the juniors in the Boston firm of Poel & Arnold. That firm, by the way, was further represented by C. H. Arnold, who is summering at Stoneham, Mass., and William J. Kelley, whose exploits are mentioned elsewhere.

F. H. Jones and his dinner committee merit much praise for the way in which the whole dinner was handled. The big dining room, the seating, the decorations—indeed the whole was as near perfect as possible.

Treasurer Whitmore, untiring, modest, was as ever at infinite pains to see that all the details that go so far toward success be attended to, each in their order. A worker, not a talker, is he, and his popularity is universal.

President Flint, although, as he told the gathering, without special gifts either as orator or a singer, lent by his presence an atmosphere of geniality and unaffected enjoyment that made things move very smoothly.

W. D. Brackett, although no longer a manufacturer of rubber footwear, is an enthusiastic member of the Club, and always attends the dinners and outings, a testimonial of genuine interest

#### LIST OF THE CLUB MEMBERS PRESENT AND THEIR GUESTS.

Alden, G. Edwin	Stephen W. B. ....	F. C. Hatch.	Keyes, Wm.	Paine, Robert E.	Solberry, Albert F.
Apsley, L. D.	Barnard, O. A.	Farrington, Wilbur E.	Eben W. Keyes.	Patterson, J. S.	W. H. Jones,
Arnold, C. H.	Two guests.	Flint, John H.	Knowles, Winfield S.	Phillips, Edwin L.	Baltimore.
W. H. Arnold.	Chipman, R. L.	Farwell, W. M.	Learned, Jas. W.	Powell, W. B.	H. F. C. Dovenmeuhle
Appleton, F. H.	Currier, Jr., Geo. O.	Fuller, W. P.	One guest.	Alex. S. Browne.	Chicago.
Allen, Horace P.	Comstock, A. L.	Gillett, S. Lewis	Locke, Frank S.	Pitcher, W. L.	Swasey, Walter S.
Bracket, W. D.	Crocker, Isaac	Glidden, Alfred A.	Leach, Ellsworth	Pearson, E. B.	A. L. Johnson.
Barker, W. E.	Elmer E. Dorman.	Hood, Frederick C.	May, Geo. H.	Pearson, Henry C.	Marshall Bouve.
J. W. Work.	Fred A. Jewell.	Hewins, E. D.	W. H. Mayo.	Rice, Robert L.	J. Edw. Dulton.
Geo. C. Dutton.	Geo. I. Crocker.	Hyatt, E. S.	Mason, H. C.	Reeves, Arthur	Stevens, W. F.
Bassett, Theo. W.	Clapp, A. W.	Higginson, Fred.	Moses, Fred. L.	Rice, Joseph M.	Two guests.
Baird, Robt. B.	Clapp, E. H.	Habich, G. Edw.	Geo. A. Patten.	Rice, Edw. R.	Taft, Benjamin
Robt. W. Poorman.	Coe, Chas. A.	Jones, F. H.	McTernan, Andrew	Rider, P. L.	Tucker, Frank W.
Two others.	Two guests.	Joseph Kelley.	Morse, H. C.	Ryder, F. T.	Whitmore, Geo. P.
Baker, Chas. F.	Daggett, W. A.	Jacoby, Ernest	One guest.	Two guests	Wanning, H. F.
Two guests.	Dunbar, J. F.	Johnson, Ralph S.	Nelson, Henry	Stedman, A. W.	Two guests.
Balderston, F. D.	F. E. Nason.	Kelley, W. J.	Odell, James E.	Schlosser, Geo.	Kiley, H. E.,
Bowers, R. J.	Dorr, R. L.	Putnam, Geo. E. B.	Putnam, Geo. E. B.	Spear, Alonzo P.	Guest of Club.
Bourn, A. O.	Edgarton, C. F.			Stedman, J. H.	

## RUBBER INTERESTS IN EUROPE.

## INCREASE OF CAPITAL OF THE "CONTINENTAL."

AT a special meeting of the shareholders of the Continental Caoutchouc- und Guttapercha-Compagnie (Hanover, Germany) on June 27 the proposal of the board to increase the capital of the company from 3,000,000 to 4,200,000 marks was adopted without debate, after a statement by Herrn Siegmund Seligmann, one of the directors, of the considerations which had prompted this motion. He stated that the demand for the products of the Continental company had shown an exceptional increase, and that the limit of the company's capacity with the means now at its disposal had been reached. Anticipating the action of the shareholders at this meeting, the erection of extensive new buildings for increasing the capacity of the company's plant had already been commenced. It was resolved to issue 1000 new shares of 1200 marks each, in all respects equivalent to the 1200 mark shares outstanding, except that for the fiscal year 1904-05 these new shares shall have a claim to only one half of the proportion of the net profits to be paid for the year on each of the old shares. The board is empowered to assign the whole new issue to the firms of Bernhard Caspar, B. Magnus, Mendel & Rosenthal, and D. Peretz, all of Hanover, at the rate of 240 *per centum*, plus the cost of revenue stamps and other expenses, said firms being obligated to offer the entire amount to the existing shareholders on the terms that the owner of 3000 marks in old shares shall be entitled to 1200 marks of the new issue at 247½ *per centum* within 14 days. The capital of the company hitherto has consisted of 1500 shares of 600 marks each and 1750 shares of 1200 marks each; the number of shares of the latter denomination is now increased to 2750. Director Seligmann stated after the meeting that it had not yet been possible to increase the price of rubber goods, notwithstanding the increased cost of crude rubber, but that the larger volume of sales had made up the difference.

## JOHNSON &amp; PHILLIPS, LIMITED.

THIS company was registered in London, June 17, 1905, with £175,000 capital in ordinary shares and £175,000 first mortgage debenture stock, to take over as a going concern the business of Johnson & Phillips, electrical, telegraph, and general engineers and cable makers, of Victoria Works, Victoria road, Old Charlton, Kent (London office at 14, Union court, Old Broad street, E. C.). The business was established in 1875. Samuel Edmund Phillips died in 1893, leaving as sole proprietor Walter Claude Johnson, who has taken little active part in the direction of the business since 1900, and the formation of the new company is to enable him to retire. The conduct of the business has during this period been left almost entirely in the hands of the general managers, Messrs. John Macgregor and F. Sydney Paterson, who will continue their services to the company. The purchase price payable by the new company has been fixed at £305,000, payable in cash, debenture stock, and ordinary shares, and the assets of the business have been certified by a firm of chartered accountants as being worth fully this amount, without including any estimate of the good will of the business which, however, is included in the sale. The issues of the new company are planned to provide £45,000 additional working capital.

## DUNLOP PNEUMATIC TYRE CO., LIMITED.

THE directors of this company have been attempting of late to give effect in the sense of the annual shareholders' meeting of November last, that a material reduction should be made in the capitalization of the company. A scheme to this end was

proposed as early as 1901, with a view to anticipating the expiry of the patents which took place in September, 1904, but this failed to meet the approval of the shareholders. The expiration of the patents made them disappear from the balance sheet as an asset, and left good will figuring alone for the large sum of £3,894,071, which was unreasonable for a trading company whose profits in the last fiscal year, after paying administrative expenses and debenture interest, were only £105,614. It is felt now that the company is obliged to enter upon some plan of reconstruction, and a circular to the shareholders under date of June 15 outlined a plan which may be summarized as follows:

The company was registered in May, 1872, with a debenture capital of £1,000,000 and share capital of £1,000,000.

## PRESENT ISSUED CAPITAL.

THE shares at present issued, with the respective rights attached thereto, are as follows:

Five per cent. cumulative preference shares of £1 each, having priority as to capital and dividends.....	£ 994,990
Eight per cent. cumulative ordinary shares of £1 each, preferential as to dividend, but not as to capital.....	999,993
Deferred shares of £1 each, entitled to all surplus dividends.....	1,999,850
Total present share capital.....	£ 3,994,833

## PROPOSED CAPITAL.

It is proposed that the share capital shall consist of:—

994,990 £5 per cent. cumulative preference shares of £1 each, preferential as to capital as well as dividend, as at present.....	£ 994,990
916,643 "new ordinary" shares of £1 each in lieu of the existing ordinary and deferred shares.....	916,643
Total new share capital.....	£ 1,911,633

## PROPOSED DISTRIBUTION OF THE NEW SHARE CAPITAL.

THE existing preference shareholders will retain their 994,990 five per cent. cumulative preference shares of £1, preferential as to capital and dividend (involving no change).....	£ 994,990
The new ordinary shares will be distributed as follows:	
To the existing ordinary shareholders 666,662 "new ordinary" shares of £1 each, <i>i. e.</i> , two shares in the reduced capital, for every three shares of present capital, cancelling all arrears of dividend.....	666,662
To the existing deferred shareholders 249,981 "new ordinary" shares of £1 each, <i>i. e.</i> , one share in the reduced capital for every eight deferred shares in present capital.....	249,981
Total.....	£ 1,911,633

A meeting of shareholders dissatisfied with the proposed scheme of reconstruction was held in Dublin on July 4. The basis of their objection lies in the fact that whereas the dividend on the preference shares has been regularly met, the ordinary shares were in arrear, as to their dividend, up to September 30, 1904, to an amount of £244,998 5s. 8d., and some of the holders of the latter are unwilling to abandon all claim to this large amount. A committee was appointed at the Dublin meeting to arrange for a conference between the ordinary and other shareholders to discuss and promote a scheme which should be more satisfactory to all parties in interest.

## CLAUDIUS ASH, SONS &amp; CO. (1905), LIMITED.

THE above named company was registered in London, July 17, 1905, with a capital of £1,000,000 [= \$4,866,500], divided equally into preference and ordinary shares at £1 each, to acquire and carry on the business of Claudius Ash & Sons, Limited, dealers in dental materials, and Ash & Co., sole manufacturers to the before mentioned company of mineral teeth, dental rubbers, and materials. The original firm of Claudius Ash & Sons, founded about the year 1825, carried on both businesses until 1889, since which time the businesses, though separate, have been carried on in close association. The growth and de-



velopment of the two businesses have been so considerable that it is now deemed expedient that the merchants and manufacturers shall be reunited in one concern with a capital adequate to meet the present requirements and afford further opportunities for developing and expansion. The combined profits of the two businesses for the five years ended December 31, 1904, are certified to have been as follows:

In 1900.....	53,324 4 6	In 1903.....	275,987 5 1
In 1901.....	67,300 13 0	In 1904.....	74,569 6 7
In 1902.....	67,887 12 6		

The businesses involved include not only the British factories and headquarters in London, but important selling depots throughout continental Europe.

#### RUSSIA.

THE profits of the Russian-American India-Rubber Co. (St. Petersburg) for the business year 1904-05 amounted to 3,908,754 rubels [= \$2,013,008.31]. The dividend for the year is 1,800,000 rubels, or 30 per cent. on 6,000,000 rubels of capital shares. The capital has been increased to 6,500,000 rubels during the past year.

#### GERMANY.

MAX WERTHEIM, managing director of Frankfurter Asbestwerke Aktiengesellschaft (vormals Louis Wertheim) since the formation of that company, eight years ago, resigned his connection with them on June 30. He had previously been active in the firm of Louis Wertheim, Frankfurt o/M., since 1887.

### VIEWS OF MR. E. V. CAREY.

FROM THE STRAITS TIMES (SINGAPORE), JUNE 13.

MR. E. V. CAREY, of Selangor, returned from a trip round the world by the P. & O. s.s. *Simla*, Saturday, and leaves here for Kuala Lumpur to-morrow.\* During his travels Mr. Carey visited the St. Louis Exhibition, after which, he declares, nothing else that he may ever see in this life will ever surprise him. It was magnificent, but would have taken as many months to see properly as he had days at his disposal.

In New York he was discovered by Mr. H. C. Pearson, of THE INDIA RUBBER WORLD, who it will be remembered, made a professional tour of this part of the world a couple of years ago. Mr. Pearson was full of enquiries about the friends he had made in the Straits, and endeavored to reciprocate the courtesies that had been extended to him here by introducing Mr. Carey to all the rubber men in the American metropolis. Of these men he noted that they differed from the big English merchants of the same approximate class in the fact that they were so accessible and so ready to leave the business of the moment so as to put their time at the disposal of the properly introduced stranger. How they made up for the time so lost he does not know; but their hospitality and courtesy were alike wonderful.

He notes that they have at last awakened to the importance and necessity of cultivated rubber and have now started cultivating rubber of their own in Nicaragua. Some New York and other large manufacturers have already opened up plantations in that Central American state, where, so far, they have only planted the *Castilloa*, which is just beginning to be productive. Mr. Carey expects that these plantations will be followed by further developments of the territory referred to as a source of rubber supply to the North American markets; but the labor conditions in that part of the world do not tend so favorably to the development of such an industry as do those which obtain in the Straits.

Mexico is also being largely planted with rubber—it being said that there are many "wild cat" plantation schemes in the latter country, boomed by queer firms in the United States. In both countries *Castilloa* is the only plant cultivated—the Pará being neglected because of the success met with by the other. The products of the plantations so far turning out cultivated rubber are of remarkably good quality, and that quality is improving rapidly.

From what Mr. Carey saw at home [in England] just prior to his departure for the East, he is disposed to warn people against flying into every investment that is thrust upon the market merely because it bears the magic name of rubber. He advises them to look into every such investment most carefully, as there seems a disposition to float unsound concerns in connection with estates in Ceylon and the Straits—estates for which no leases, or even locations in some instances, have as yet any existence. In one such case, indeed, the chairman of one of these more than doubtful money traps was warned by two leading Ceylon residents of London that it was such a patently uncertain concern that he might be liable to find himself in the dock if the prospectus were not withdrawn. That warning, however, seems to have had no effect on the promoters, because the prospectus had not been withdrawn when Mr. Carey left. This concern, it may be mentioned, was very severely handled by the *Financial News* some months ago—the allusions to it being republished in these columns. The name of the company, it may be added, affects the Straits in a fashion, because it rejoices in the euphemistic and alluring registered title of "The Malay States Planters' Syndicate." There are no F. M. S., Straits, or Ceylon people known to be connected with the concern.

Mr. Carey has only come back here on a short visit, with the object of exercising his option to take up his concession of 30,000 acres comprised in the island adjoining Port Swettenham. His investigations in London and elsewhere have convinced him that the prospects for floating this concession into a large company are exceedingly promising. Accordingly he now proceeds to the Selangor capital with the object of securing his titles and completing the other necessary arrangements in respect of the transfer with the F. M. S. government. He will return to England as soon as these matters have been settled, which will probably be in about a month's time.

\* \* \*

[SOME correspondence addressed by Mr. Carey while in America to Mr. W. W. Bailey, chairman of the United Planters' Association of the Federated Malay States, and afterward appearing in *The Malay Mail* (Kuala Lumpur) related to the subject of direct shipments of rubber from the Straits planters to American manufacturers. For the interest of English readers he mentioned that there are no such auction sales in New York as exist for rubber in London, and that the essential feature in the case of shipment to the American market is that the consignees be people of unquestioned integrity. Mr. Carey mentioned meeting Mr. Bruce Webster who about 12 years ago was agent at Kuala Lumpur of the Chartered Bank of India, Australia and China, and who now holds the position of New York manager of the same bank who stated that he would take bills on responsible rubber manufacturers in America from the Straits.]

MEXICO.—The manager of the American Stamps Works (City of Mexico) recently made a visit to Yucatan for the purpose of establishing a branch there, on account of the increasing demand for rubber stamps, consequent upon the improvement of business conditions in Yucatan, and especially in the henequen (sisal) trade.

## OBITUARY.

**A** MASA A. MARKS died at his home in South Beach, Connecticut, on the morning of July 19, in his eighty-first year, of heart failure, induced it is supposed by the extreme heat. Mr. Marks was the founder of the artificial limb industry based upon the use of rubber, his business in this line becoming known all over the world. Mr. Marks was born April 3, 1825, at Waterbury, Connecticut, being descended from early settlers of New England, including among his ancestors many who in their day were useful and honored citizens. First working on a farm, he embarked in the milling



business for himself at the age of 18 years at Milford, removing later to New Haven, and finally to New York city, each removal being marked by an increase in his business.

In 1853 he became a partner with his older brother, David B. Marks, who invented and obtained a patent on an artificial leg, but on account of the slow progress of the business the brother became discouraged and withdrew. In

1863 A. A. Marks obtained a patent on a rubber foot which was an entirely new feature in the prosthetic industry, and for that matter one of the earliest uses of India-rubber. The merits of the invention speedily known and appreciated; in fact, it was the rubber foot that gave Mr. Marks' business its first important impetus and from that time he met with the most encouraging success.

From time to time additional patents were obtained by Mr. Marks for improvements on the rubber foot and later for a rubber hand—discoveries which brought Mr. Marks prominently before the medical and surgical professions and the public generally, and gave him a world wide reputation in his line. In 1864 he received a contract from the United States government to furnish artificial limbs to the unfortunate soldiers and sailors of the civil war, and he has since carried a perpetual contract to renew those limbs as required. The American Institute in its palmiest days acknowledged him as the authority in his profession and the Franklin Institute and other scientific bodies have awarded him medals recognizing his inventive skill. [See the article on "Artificial Legs and Arms of Rubber" in THE INDIA RUBBER WORLD, May 10, 1896, page 228.]

In 1850 Mr. Marks married Miss Lucy A. Platt, daughter of Charles Platt, of New York, and of their seven children four survive: Charles A., who is an Episcopal clergyman; George E. and William L., who entered into partnership with their father in 1885 (after which the father retired from active control of the business), and Anna A. Mr. Marks resided in New York city from 1852 to 1871, during which time he was actively interested in public matters and devoted to the success of the Republican party. Later for twelve years he served as school visitor in Greenwich township, Connecticut, being for most of the time chairman of the board, besides being for a number of

years justice of the peace. He was an active member and liberal supporter of the Sound Beach Congregational Society and a member of Manitou Lodge No. 106, F. and A. M. (New York), the New England Society of New York, Veteran Masonic Association, Riverside Yacht Club, Sound Beach Country and Golf Club, and many other institutions.

Although in his eighty-first year, Mr. Marks was up to the moment of his death remarkably vigorous, physically and mentally. He took a very active interest in local affairs and gave much thought to the beautifying of his estate on Long Island sound. It was a pleasure to him to note the remarkable progress made in the development of Sound Beach as a residential spot. He had good reason to be proud of what had been accomplished, for he was the pioneer in all substantial progress at that delightful place. He will be sincerely mourned in Sound Beach and among a wider circle of friends throughout the country who appreciated his high personal character.

\* \* \*

**THEODORE C. WEEKS**, who died at his home in Melrose, Massachusetts, on July 11, was born at Vineyard Haven, in that state, in 1840. When he was four years old the family removed to Colchester, Connecticut, where at an early age he became employed in the rubber shoe factory of the Hayward Rubber Co., organized by the late Nathaniel Hayward, whose daughter, Louisa, Mr. Weeks married in 1859. Later the "Red Mill," Stoneham, Mass., once used by the late Hon. E. S. Converse in grinding dyestuffs, was converted into a rubber factory operated by the N. Hayward Rubber Co., which afterward became the Haywardville Rubber Co. This business was organized by Nathaniel Hayward, in connection with his brother Daniel and other members of the family, and Mr. Weeks was connected with it at various times in different capacities. He was there as early as 1862 and took part in the winding up of the Haywardville Rubber Co., seven or eight years later. There was an interval between the two companies named here, when the Stoneham factory was operated by the Rubber Sole Shoe Co., of which Mr. Weeks was treasurer. The mill finally became the property of Mr. Converse. Afterward, during a number of years Mr. Weeks was a broker in Boston.

#### "THERMALITE" IN GERMANY.

**A** S indicated in the issue of this Journal of June 1, 1905 [page 305], the article marketed in the United States as the "Thermalite" bag, in competition with the rubber hot water bag is made under the system which is the basis of the Deutsche Thermophor-Aktiengesellschaft (Andernach, Germany), founded in 1899. The business report of the German company for the last business year, according to the *Gummi-Zeitung* (July 7), shows a decreasing amount of business. The sales on the rubber goods were 7446 marks less than in the preceding year. The total sales were: Rubber goods account, 47,258 marks [= \$11,247.40]; metal goods account, 16,816 marks [= \$4002.21]; muscle invigorator account, 1459 marks [= \$347.24]. "The report calls it a fortunate occurrence that the company, after extended efforts, succeeded in selling the American patents for \$40,000. The year 1904 showed a loss of 28,942 marks [= \$6888.20], after deducting 51,649 marks [= \$12,292.46] for the sinking fund." The capital of the German company is 743,000 marks [= \$176,834]. At the end of the business year the company owed 194,922 marks [= \$46,391.46]; there was owing to the company 90,184 marks [= \$21,463.79]; and it had in hand 1062 marks [= \$252.76] in cash and bills of exchange. The patents have been included in the assets at a valuation of 374,028 marks [= \$89,018.67].



## NEWS OF THE AMERICAN RUBBER TRADE.

## THE B. F. GOODRICH CO.—INCREASE OF CAPITAL.

THE B. F. Goodrich Co. (Akron Rubber Works) on July 13 filed with the secretary of state of Ohio a certificate of increase of capital stock, from \$5,000,000 to \$10,000,000. The additional shares have been all taken by the former shareholders of the company. The increase has been made necessary partly by the growth of the regular business of the company and partly by their establishment of a boot and shoe department. The building for the new department is rapidly nearing completion, and the company hope to be operating in it sometime in September.

## UNITED STATES RUBBER CO.—DIVIDEND.

THE board of directors of the United States Rubber Co. on July 6 declared a regular quarterly dividend of 2 per cent. upon the preferred stock from the net earnings of the company and its subsidiary companies for the first three months of the fiscal year beginning April 1, 1905. The net earnings for the first quarter of the year (June partially estimated) are reported to be \$966,751.21. The net earnings for the corresponding period last year were \$866,510.32, showing an increase in the earnings this year over last of \$100,240.89. The amount required for this dividend is \$470,510.

## NATIONAL INDIA RUBBER CO. (BRISTOL, R. I.)

LE BARON C. COLT, who was appointed agent of the above named company in January last, has been appointed to the additional position of superintendent of the factory, in which capacity he will have two assistants, Elwyn C. Fish, and James W. Franklin. Mr. Fish has been assistant superintendent for some time past, and Mr. Franklin had been foreman of the stitching and packing departments of the factory. The daily output of rubber footwear at this factory at latest reports was about 30,000 pairs, and there were enough orders in hand for rubber goods of various kinds to insure the operation of the factory at its present capacity for several months to come, making work for about 2000 employes.

## HARBURG AND VIENNA INDIA-RUBBER CO.

MR. C. H. TAYLOR, one of the managers of the New York agency of the Vereinigte Gummiwaaren-Fabriken, Harburg-Wien, has lately returned from Europe, where he spent several weeks visiting the various factories of the company. He reports the rubber industry in a good condition on the continent, the business of the company named being greater this year than at any former period. The company's American business in red rubber toys and rubber balls is increasing, and they are about to introduce in this country their new motor tires.

## CONSOLIDATED COTTON DUCK CO.

PLANS are reported to be under way for improvements in the large mills of this company around Baltimore. Based upon the recommendations of experts who have been studying the situation for some time past, improvements to cost \$1,000,000 or more, and which will require at least a year for their completion, have been decided upon for the mills at Hampden, Woodberry, Mount Vernon, and Mount Washington. Old machinery is to be replaced with up to date equipment, and while the number of spindles is not to be increased materially, a larger output is anticipated, with a considerable reduction in the cost of manufacture. — The new company has been organ-

ized by the election of S. Davies Warfield, chairman of the board; C. K. Oliver, president; D. H. Carroll, vice president and treasurer; H. L. Smith, assistant treasurer; and C. S. Green, assistant secretary

## AMERICAN PRODUCTION CO. (PITTSBURGH)

[See THE INDIA RUBBER WORLD, July 1, 1905, page 34.]

THE Denver (Colorado) *Republican* of July 26 having referred to this company as being interested in the insulation of wire by a special process, in which the Colorado rubber can be utilized, President M. G. Leslie, of the company, replies to an inquiry from THE INDIA RUBBER WORLD that they are not now prepared to make any statement. "When the matter is fully developed," he says, "we will give you any information that we may have for publication."

## ANOTHER GOLF BALL PATENT SUIT.

SUIT for alleged infringement of patent has been brought by the Haskell Golf Ball Co. against the Seaman Manufacturing Co., of Milwaukee, a corporation of Wisconsin, in the United States circuit court for the eastern district of Wisconsin, the bill of complaint having been filed May 4, 1905. The defendant company manufacture what they call the "Bogey" ball under United States patent No. 730,303, granted to Alonzo D. Seaman. In its construction small rubber rings are stretched by special machines over a non elastic center until the core has acquired the proper size, when a Gutta-percha cover is applied. The Seaman company announce to the trade their intention to "fight the suit to a finish."

## ALABAMA RUBBER AND SUPPLY CO.

THIS is the style of a jobbing house established at Birmingham, Alabama, to represent in that state the Mechanical Rubber Co. of Cleveland, Ohio. There is carried in stock a full line of the belting, packing, hose, tubing, and plumbers' supplies made by that company. The furnace, mine, and mill trade not only of Birmingham but throughout Alabama is solicited by this house. There is also marketed a line of vehicle tires manufactured for the house and under its brand by the Goodyear Tire and Rubber Co. (Akron, Ohio).

## COLORADO RUBBER ITEMS.

THE board of trade of Salida, Colorado, has sent an exhibit, prepared by Secretary O. J. Kennedy, to the Lewis and Clark fair, at Portland, Oregon, for the purpose not only of advertising the city, but of bringing into greater prominence the Colorado rubber plant and its product.

=Articles of incorporation were filed July 8, 1905, with the secretary of state at Lansing, Michigan, by the P. F. U. Rubber Co., with \$250,000 capital, the stated object being: "The extraction, manufacture, and sale of rubber like gum and the manufacture and sale of articles made therefrom." The operations of the new company are to be carried on at Buena Vista, Colorado. The common stock (\$175,000) is represented by a license to Edward C. Dunbar from the American Crude Rubber Co., dated May 17, 1905, to extract rubber from the Colorado plant by methods covered by patents owned by the American company. The company takes its name from the botanical term *Periconia utilis*.

## AMERICAN CHICLE CO.—ANNUAL MEETING.

AT the annual meeting in Jersey City, New Jersey, on July 18, of the shareholders of the American Chicle Co., the report presented showed that after paying dividends during the year

amounting to \$900,000 there was a surplus of undivided profits of \$326,000. Dividends on the preferred stock at 6 per cent. amounted to \$180,000 and on the common stock at 12 per cent. to \$720,000. During the fiscal year a factory was erected in San Francisco; that at Cleveland, Ohio, was enlarged materially, and another factory is being constructed in Toronto. The directors were reelected, the vacancy caused by the recent death of Thomas Adams, Sr., being filled by the election of his son John D. Adams. The board now consists of Thomas Adams, E. E. Beeman, W. J. White, R. F. Tully, G. A. Stanton, George H. Worthington, J. P. Primley, T. L. Jefferson, John D. Adams, Stephen T. Britten, Henry Rowley, and W. B. White. The officers were reelected: W. J. White, president; G. H. Worthington, vice president; and Henry Rowley secretary and treasurer. Recent quotations for the company's shares were: Preferred, 97 bid 100 asked; common, 122 bid 126 asked.

#### RUBBER AT THE LEWIS AND CLARK FAIR.

THE Bowers Rubber Co. (San Francisco) are represented at the Lewis and Clark Fair at Portland by an attractive exhibit of the products of their rubber factory, of which an illustration is presented herewith. As theirs is a California industry the Messrs. Bowers have had their booth and showcases constructed of California materials, and taken as a whole their exhibit has



been very much complimented. A unique feature is the "Rubber Neck Lady," who is made to turn by means of an electric motor so as to face alternately up and down the aisle, thus attracting a great deal of attention. The company offer a prize for a suitable name for this lady, and the public are taking much interest in the contest.

#### NEW INCORPORATIONS.

CICERO Rubber Co., July 1, 1905, under Illinois laws, to manufacture, buy, and sell rubber goods; capital, \$2500. Incorporators: William T. Gotbed, Arthur McNeal, E. E. Lovejoy, B. Kellogg. Principal office: Clyde, Illinois.

=Oceanus Manufacturing Co., June 16, 1905, under New York laws; capital \$10,000. Incorporators: Henry Russell, Adolph Morris, and D. C. Solomon, all of New York city. This company has been formed for the purpose of manufacturing Cravenette rainproof clothing, for the general trade but particularly for the automobilists' use. The treasurer, Adolph Morris, is half owner of the Manhattan Storage Co. (New York), one of the largest automobile supply houses in the country, and which plans to handle the output of the new company. Mr. Morris informs THE INDIA RUBBER WORLD that while the present capital of the Oceanus company is only \$10,000, there will be no

lack of means for the development of its business in case the same shall prove as profitable as is anticipated.

=The Tennant Auto Tire Co. (Springfield, Ohio), June 7, 1905, under Ohio laws. Capital authorized, \$100,000. Incorporators: Irvin Tennant, James Hohman, H. A. Toulmin, Ira W. Wallace, Elwood Allen, and Luther Neir. This corporation has been formed to succeed a New Jersey corporation by the same name which has been engaged for a year or two in marketing punctureproof tires patented by Irvin Tennant.

=National Rubber Co. (San Antonio, Texas), June 16, 1905; capital, \$100,000. Incorporators: Otto Koehler and Otto Whrmund of San Antonio, and Pablo Bergner of Mexico City. It is understood that the company will exploit Guayule.

=The Stockton Rubber Co., July 18, 1905, under New Jersey laws; to deal in scrap rubber and to reclaim rubber; capital, \$50,000. Incorporators: Dominic J. Price, John R. Trewin, and Oliver I. Blackwell—all of Lambertville, New Jersey.

=Powers Rubber Horseshoe Co., licensed July 15, 1905, under Illinois laws; the incorporation is not yet completed. The preliminary papers are signed by Reuben D. Buckingham (No. 354½ North Clark street, Chicago), Oscar Lund, and Thomas Kiley.

=The Pneumatic Tire Protector Co. (Dayton, Ohio), July 12, 1905, under Ohio laws; capital \$10,000. George G. G. Peckham is manager, and the other incorporators are Walter S. Thomas, G. T. Thomas, D. W. Wood, and E. E. Coates. The company will manufacture "life preservers" of rubber and canvas for automobile tires.

#### HARTFORD RUBBER WORKS CO.'S CONFERENCE.

THE annual conference of the officers, branch managers, and traveling representatives of this company has now become a much appreciated fixture in the policy of the company. It occurred this year during the second week of July, with a very full attendance. The conference was for the purpose of reviewing the work of the past season and making plans for the future. It is understood that the reports made indicated a very satisfactory year, and that during the first six months of the present year the sales amounted to \$2,050,000, which represents more business than the company did during all of 1904. President Charles H. Dale presided at some of the meetings, and there was evident among the men present a lively feeling of appreciation of the manner in which he has conducted the affairs of the company. There were in attendance, in addition to members of the home office staff:

##### OFFICIAL BOARD.

Charles H. Dale, president.  
Ernest Hopkinson, member of the board.  
William Seward, Jr., vice president and general manager.  
Justice D. Anderson, vice president.  
James W. Gilson, secretary and treasurer.

##### BRANCH MANAGERS.

New York (Uptown)—E. S. Roe.	Minneapolis—H. E. Severance.
Chicago—S. E. Gillard.	Los Angeles—H. O. Harrison.
Denver—H. E. Field.	San Francisco—C. H. Minto.
Buffalo—James How.	St. Louis—Richard Clunan.
Cleveland—George Ostendorf.	Kansas City—Joe Paupenaude.
Philadelphia—Franklin Kesser.	M. J. Tansey, General western manager.
Detroit—E. E. McMaster.	
Boston—E. R. Benson.	

##### SALESMEN.

C. C. Harbridge,	A. H. Wikoff,	E. S. Benson,
A. W. Kirk,	P. H. Goodall,	H. Snyder,
R. H. LaPorte,	W. H. Dougherty,	W. H. Bell,
D. W. Shattuck,	H. Snyder,	J. G. Squires,
	E. S. Edwards.	

#### GOOD SALE OF A TIRE PATENT.

THE following item is supplied by the company named in the opening sentence: "Mr. Frank Schudell, compounder and old employé of the Chicago Tire and Rubber Co., has been



given by the firm a trip to the old country. He will visit Ireland (his old home), Berlin, Liverpool, Paris, and London. In Germany he will show the process for making and using a valuable invention in connection with vehicle tires to a prominent rubber manufacturer, they having just purchased same from John L. G. Dykes, formerly of this company, for \$50,000."

#### THE NEW HARD RUBBER CORPORATION.

ARTICLES of incorporation of The Hard Rubber Company of America, under the laws of New York, were filed with the secretary of state, June 28, 1905. The amount of capital stock is stated to be \$2,500,000 in preferred shares entitled to 8 per cent. cumulative dividends, and \$5,000,000 in common shares, all of the par value of \$100. The papers were signed by persons connected with the American Hard Rubber Co. (New York). This is in effect an increase in the capitalization of the last named company, in a more convenient form than was possible under its existing charter. The new corporation is in the nature of a holding company, and will acquire the shares of the American Hard Rubber Co. and the constituent companies of the latter, without terminating their corporate existence. The increase of capital has been rendered necessary by the steady growth of the business, and has been fixed at a figure which will provide for the continued increase which appears warranted by the general prosperity of the country. During the last years the company has remodelled and enlarged its factories and the work is being further energetically continued.

#### SUIT OVER A CORPORATE TITLE.

MENTION was made in THE INDIA RUBBER WORLD of July 1, 1903 (page 350), of an action brought in the New Jersey court of chancery by the Eureka Fire Hose Co. (New York and Jersey City) against The Eureka Rubber Manufacturing Co. of Trenton, N. J., to have the latter enjoined from the use of the word "Eureka" in advertising their products, particularly in the marketing of fire hose, and further to be restrained from using the name "Eureka" in their title as a corporation. Both parties in this action are corporations under the laws of New Jersey, the complainants being the older company, and their business being principally in the manufacture of rubber lined cotton fire hose. The defendant company was incorporated July 15, 1902, and has engaged principally in the manufacture of mechanical rubber goods, rubber carriage drill, rubber carriage tires, rubber covered wire, and to a much lesser extent in the manufacture of fire hose. Following an opinion rendered at the February term, 1905, by Vice Chancellor Emery, in favor of the plaintiffs, the decree of the court by Chancellor Magie filed June 6 is that the defendants be enjoined from the use of the word "Eureka" as part of their corporate title, in connection with the manufacture and sale of fire hose or any other hose such as is manufactured by the Eureka Fire Hose Co. It also enjoins them from the use of the word "Eureka" as a distinguishing brand in connection with the manufacture and the sale of such goods. The defendants, who disclaim having used the word "Eureka" except as a portion of their corporate title, have appealed the case to the court of errors and appeals of New Jersey, which acts as a stay on the injunction.

#### THE DISAPPOINTMENT OF OLATHE.

THE prospects are not bright for the erection at Olathe, Kansas, of a \$150,000 rubber reclaiming plant, by Mr. C. S. Heller, of Akron, Ohio, with the moral and financial support of the Olathe Commercial Club. It is understood that two citizens of Olathe who became directors in the Central Rubber Co., a Maine corporation promoted by Cassius M. Gilbert, of Kan-

sas City, for the purpose of building the Heller plant, have resigned, with the feeling that somebody was working in the dark to prevent the factory from being located at Olathe. The *Mirror* of that town says: "The other large rubber manufacturers did all in their power to dissuade Heller from coming west, and it is believed the pressure and other inducements together with the scheming of another director, are the direct causes of Mr. Heller's determination to stay at Akron."

#### NEW YORK STOCK EXCHANGE TRANSACTIONS.

##### UNITED States Rubber Co.:

DATES.	COMMON.			PREFERRED.		
	Sales.	High.	Low.	Sales.	High.	Low.
Week ending June 24	2,350	38	36 $\frac{1}{2}$	2,700	104 $\frac{3}{8}$	101 $\frac{1}{2}$
Week ending July 1	6,450	41 $\frac{1}{2}$	38	4,650	100 $\frac{1}{2}$	105 $\frac{3}{8}$
Week ending July 8	30,550	44 $\frac{1}{2}$	40	8,100	110 $\frac{1}{4}$	108
Week ending July 15	9,020	44	41 $\frac{1}{4}$	3,850	110	108 $\frac{1}{2}$
Week ending July 22	56,715	49 $\frac{1}{4}$	43	9,921	113 $\frac{1}{2}$	110 $\frac{1}{4}$

##### RUBBER Goods Manufacturing Co.:

DATES	COMMON.			PREFERRED.		
	Sales.	High.	Low.	Sales.	High.	Low.
Week ending June 24	800	33 $\frac{1}{4}$	32	750	101	101
Week ending July 1	2,800	34 $\frac{3}{4}$	33 $\frac{3}{4}$	1,021	104 $\frac{1}{2}$	102 $\frac{1}{2}$
Week ending July 8	1,200	34 $\frac{1}{2}$	33 $\frac{1}{2}$	300	104	104
Week ending July 15	1,300	34 $\frac{1}{4}$	34	215	104	104
Week ending July 22	900	34 $\frac{3}{8}$	34	300	104 $\frac{1}{2}$	104

#### PHOENIX RUBBER CO. (BARBERTON, OHIO).

THE newspapers of Lancaster, Ohio, report that the company above named has secured premises in that town with a view to removing its factory from the present location. The Phoenix Rubber Co. was incorporated in March last, with \$15,000 capital, to succeed the Lilly Rubber Co., of Barberton.

#### THE GOODYEAR TIRE AND RUBBER CO. (AKRON).

THIS company has been making extensive additions to and improvements in its plant at East Akron. The engine room is being enlarged by the construction of an addition 80 X 38 feet, to accommodate a 1500 HP. cross compound Corliss engine, which will almost double the power capacity. The tire department will be enlarged by the addition of a new room 90 X 46 feet, now being constructed. Within the past year, or since the reorganization of the finances of the company, it has been making encouraging progress. The pneumatic golf ball is reported to have become a very successful feature of the company's business.

#### TRADE NEWS NOTES.

BOSTON Woven Hose and Rubber Co. announce that Mr. Frederick E. Stockwell, who for the past four years has represented them in northern New England and Canada, has been placed in charge of their Philadelphia office, with headquarters in the Drexel building. Mr. Stockwell was formerly located in Philadelphia where he has a large circle of acquaintances.

=The Hodgman Rubber Co. (New York) have increased their capital stock to \$500,000, one half each in preferred and common shares. Before the increase the amount of capital outstanding was \$132,800 in preferred and \$250,000 in common stock.

=The Woonsocket Rubber Co. were advertising recently for help with a view to an increased production in rubber shoes at their "Alice" mill.

=Referring to newspaper reports of a strike at the factory of the Davol Rubber Co. (Providence, Rhode Island), about the middle of the month, it is understood that the whole affair was of little importance and bore no relation to wages. Some changes were made in systemization of the work in one of the departments, and before this became fully understood some of the employes stopped work for a short time.

=Howard H. McGee, until lately New England representative of the Seamless Rubber Co. (New Haven, Connecticut), has been transferred to that company's Chicago office, where he will be located as their western representative. He took charge of his new position on July 17.

=The Keystone Brush Co. (College Point, New York) has been organized lately of rubber brushes and small sundries. C. H. Hoppe is manager.

=Edred W. Clark, machinist, of Hartford, Connecticut, was burned out on June 27, causing a total loss, which was only partially covered by insurance. The fire began in a neighboring building and both that and the one which he occupied were entirely destroyed. Mr. Clark made a specialty of tubing machines and presses for the rubber industry, and his advertisement in the first issue of THE INDIA RUBBER WORLD (October, 1889) mentioned him as successor to L. Tiffany & Co.

=Mr. Warren M. Poorman will represent the Rubber Trading Co. (New York) at their Boston office, No. 161 Summer street.

=There was introduced into the Philadelphia select council on July 6 an ordinance granting the Philadelphia Rubber Works permission to construct a railroad siding on Schuylkill avenue, near Thirty-seventh street. The ordinance was promptly passed by that body and later in common council, and it is understood that work will be begun on the new siding at once. It will greatly facilitate the movement of freight over the different adjacent railroads to and from the rubber company's works, which are the largest in Philadelphia.

=The Beacon Falls Rubber Shoe Co. are laying pipes to connect the new cottages built for their employes with the town water system.

=The Fisk Rubber Co. (Chicopee Falls, Massachusetts) have established a branch at San Francisco for the better management of the trade in Fisk tires on the Pacific coast, which will be in charge of Mr. G. E. Johnson, with headquarters at No. 409 Golden Gate avenue.

=The Edgeworth factory of the Boston Rubber Shoe Co. has not been operated on Saturday afternoons since the first of July, and the same program will be continued through August, the "ticket" being reduced to enable the employes to finish the week's work by Saturday noon.

=The brick work in connection with the installing of new boilers at the "Alice" mill of the Woonsocket Rubber Co. is being done by Michael McLaughlin, who had the contract for the brick work when this factory was erected, in 1889-90.

=The annual shutdown of the factory of the Lambertville Rubber Co. (Lambertville, New Jersey), for inventory and repairs, occurred this year as usual in July, the resumption of work being due about August 1. The company are understood to be well provided with orders for footwear.

=In the matter of the Cable Rubber Co., in bankruptcy, the United States court at Boston has declared an additional dividend of 4 per cent. for the creditors, making a total of 28 per cent. The company's liabilities were stated originally to total \$114,938, with assets of \$32,242.

=Despite the prominence of Akron, Ohio, as a rubber manufacturing center, it appears that the city fire apparatus there has never been equipped with rubber tires. One of the local

manufacturers, therefore, offered to supply such equipment recently at a specially low price, but it was decided by the municipal authorities that the city was not in a financial position to purchase rubber tires for the fire engines and hose carts, at any price.

=Mr. William H. Goodyear, son of the late Charles Goodyear, and curator of the museum of fine arts of the Brooklyn Institute, was reported lately to be in Venice, whither he had gone to study the projected restorations of the famous basilica of St. Mark.

=The statue of Charles Goodyear, of heroic size, which stood in front of the Manufacturers' building at the St. Louis Exposition last year, has been presented to the Goodyear Rubber Co., and is on exhibition at their St. Louis store.

=Benjamin H. Pratt, of Chicago, has filed a petition in voluntary bankruptcy in the United States district court in that city, stating his liabilities at \$99,308.78, and assets at \$93. Most of his liabilities relate to the time when he was president of the Manufacturers' Agents and Supply Co., the Chicago branch of the Elastic Tip Co. (Boston) prior to the embarrassment of the latter concern in 1898.

=At Silver Lake Park (Akron, Ohio) on July 8 a baseball game between nines from the factories of The B. F. Goodrich Co. and the Mechanical Rubber Co. (Cleveland) was won by the former by a score of 10 to 1.

=Mr. James W. Franklin who, at the beginning of last month was made assistant superintendent of the factory of the National India Rubber Co., has been a member of the town council of Bristol, Rhode Island, for seven years, and president for six years.

=The Republic Rubber Tire and Shoe Co., Inc.—F. E. McEwen, manager (New York) have consolidated their factory and offices at Nos. 449-451 West Fifty-third street.

=The Tanganyika Rubber and Trading Co. have filed articles of incorporation in the office of the secretary of state of Montana, with \$50,000 capital stated. The incorporators are Roland H. Creech, C. F. Bergstrand, and Robert Haydn—all citizens of Butte, Montana. It is understood that the object of the company is to trade in rubber in the Lake Tanganyika region, in Central Africa.

=Aiton Machine Co. have just issued their Bulletin No. 49, showing one of the many sizes of washers for rubber work which they are building. Copies of this bulletin may be had upon application at their New York office, No. 126 Liberty street.

#### PERSONAL MENTION.

MR. S. H. C. MINER, president of the Granby Rubber Co. (Granby, Quebec), spent a week or ten days, early in July, at Vancouver, British Columbia. Mr. Miner has been for years interested in mining and industrial interests in that province, and in interviews reported in the Vancouver press he declared his confidence in the continuation and growth of its prosperity.

=Mr. Charles R. Flint was reported on July 13 to be at Stockholm, in conference with the Swedish minister of marine. The opinion was expressed that the subject was the transfer to Sweden of warships which certain South American republics are said to be willing to sell.

=Mr. Charles A. Coe, of Boston, whose right arm has been practically useless for a month or more, has just gone through with an operation which is designed to release certain muscles and make the arm as good as new. It will delight his many friends to know that the operation was wholly successful and that he will be able soon to give his friends the right hand of fellowship as heartily as of yore.



## REVIEW OF THE CRUDE RUBBER MARKET.

THE month under review closes with a condition of firmness in the market for rubber, after a period of unusual dullness. Prices of all Pará grades are somewhat lower at the end than at the beginning of the month, though still much higher than at the same date one year ago. In respect to other sorts, conditions vary, some showing a slight decline, while prices for some grades have been well maintained. Buying by manufacturers has been light, from all reports, and it is evident that, in view of the small stocks available and the light receipts at primary markets at this season, any marked activity in buying would result in an upward tendency of prices.

Receipts at Pará (including Caucho) to July 28 were 1205 tons, against 1250 for the whole month of July last year, which may be taken as pointing to the usual sized crop this year. But if the crop total for the season just opened should equal that of last year (which was the largest yet harvested), it does not signify a speedy replenishment of visible supplies. During the last season only 40 per cent. of the year's total reached Pará by December 31, whereas in the year before, 44 per cent. had arrived by that date. Every year the center of production recedes further from the seaboard, delaying the date of arrival in the consuming markets of the bulk of the product. From figures printed on the following pages it is evident that the increase in the output from the Amazon valley last season came from beyond Brazilian territory (including the newly acquired Acre district).

Following is a statement of prices of Pará grades, one year ago, one month ago, and on July 31—the current date:

PARÁ.	August 1, '04.	July 1, '05.	July 31.
Islands, fine, new...	113@115	128@129	125@126
Islands, fine, old.....	none here	none here	none here
Upriver, fine, new.....	118@119	130@131	127@128
Upriver, fine, old.....	119@120	132@133	129@130
Islands, coarse, new.....	64@65	72@73	67@68
Islands, coarse, old.....	none here	none here	none here
Upriver, coarse, new.....	91@92	95@96	90@91
Upriver, coarse, old.....	none here	none here	none here
Caucho (Peruvian) sheet.....	68@69	72@73	70@71
Caucho (Peruvian) ball.....	77@78	80@81	80@81

The decline in other sorts at New York has been less marked, as the figures show:

AFRICAN.	CENTRALS.
Sierra Leone, 1st quality	Esmeralda, sausage...82 @83
Massai, red.....	Guayaquil, strip.....70 @71
Benguella.....	Nicaragua, scrap...81 @82
Cameroon ball.....	Panama, slab.....61 @61
Accra flake.....	Mexican, scrap.....81 @82
Lopori ball, prime....	Mexican, slab.....57 @58
Lopori strip, prime....	Mangabeira, sheet....71 @72
Madagascar, pinky....	EAST INDIAN.
Ikelemba.....	Assam.....96 @97
	Borneo.....41 @42

## Late Pará cables quote:

Per Kilo.	Per Kilo.
Islands, fine.....	Upriver, fine.....
Islands, coarse.....	Upriver, coarse.....
Exchange, 17.1.	

## Last Manáos advices:

Upriver, fine.....	Upriver, coarse.....
Exchange, 17.1.	

## NEW YORK RUBBER PRICES FOR JUNE (NEW RUBBER).

Upriver, fine.....	1.30@1.35	1.11@1.14	84 @83
Upriver, coarse.....	94@97	70 @74	
Islands, fine.....	1.28@1.33	1.08@1.11	85 @89
Islands, coarse.....	72@76	68 @68	54 @57
Cameta.....	74@80	64 @68	56 @60

## Statistics of Para Rubber (Excluding Caucho).

NEW YORK.		Total 1905.	Total 1904.	Total 1903.
	Fine and Medium.			
Stocks, May 31.....	361	578	327	541
Arrivals, June.....	261	490	252	652
Aggregating.....	622	1068	579	1193
Deliveries, June.....	227	474	442	826
Stocks, June 30.....	395	594	137	367
PARÁ.		ENGLAND.		
	1904.	1903.	1904.	1903.
Stocks, May 31.....	365	115	370	1400
Arrivals, June.....	985	1770	760	570
Aggregating.....	1350	1885	1130	1970
Deliveries, June.....	1190	1770	645	650
Stocks, June 30.....	160	115	485	1320
World's visible supply, June 30.....	1790	1506	2712	
Pará receipts, July 1 to June 30.....	27,311	25,925	26,546	
Pará receipts of Caucho, same dates.....	5474	4669	3204	
Afloat from Pará to United States, June 30.....	96	98	495	
Afloat from Pará to Europe, June 30.....	455	511	415	

Albert B. Beers (New York) reports:

"There is nothing new in the commercial paper situation since the report of a month ago, the demand for rubber notes still continuing fair at 4½ @ 5 per cent. for the best, and 5½ @ 6 per cent. for the smaller concerns."

## Canada.

VALUE of imports of India-rubber, gutta-percha and manufactures thereof for 10 months of the last three fiscal years, beginning July 1:

1904.	1905.
Great Britain.....	\$ 6,863
United States.....	\$ 1,356,474
Other countries.....	714
Totals.....	\$1,364,051
Great Britain.....	\$328,188
United States.....	\$323,338
Other countries.....	\$156,262
Totals.....	\$847,081

## Ceylon Exports (Plantation Rubber).

POUNDS.	POUNDS.
January 1 to May 22.....	39,770
Week ending May 29.....	344
Week ending June 5.....	794
Week ending June 12.....	2,608
Week ending June 19.....	1,922
Total to June 19.....	45,438
Same period, 1904.....	32,225
Same period, 1903.....	22,533

## Rubber Scrap Prices.

NEW YORK quotations—prices paid by consumers for carload lots, in cents per pound—show a slight increase over the figures last reported, as follows:

Old Rubber Boots and Shoes.....	6 1/4 @ 6 3/8
Do.....	5 1/2 @ 5 3/8
Pneumatic Bicycle Tires.....	5 @ 5 1/4
Solid Rubber Wagon and Carriage Tires.....	6 1/2 @ 6 3/4
White Trimmed Rubber.....	8 1/2 @ 8 3/4
Heavy Black Rubber.....	4 1/2 @ 4 3/8
Assorted Hose.....	2 3/4 @ 3
Fire and Large Hose.....	2 1/4 @ 2 1/2
Garden Hose.....	1 3/4 @ 1 7/8
Mattings.....	1 3/4 @ 1

Years	English	Spanish	French	Other	Tals.
1904-05.....	1885	704	177	51	2817
1903-04.....	1815	900	143	66	2924
1902-03.....	843	1053	103	100	2099
1901-02 .....	1206	680	108	98	2092
1900-01.....	1026	735	178	..	1939
1899-00.....	1893	703	293	..	2889
1898-99.....	2100	1002	170	..	3272



## Antwerp.

TO THE EDITOR OF THE INDIA RUBBER WORLD: At the inscription sale of June 28, out of 263 tons offered, 218 were sold at prices showing an average decline of about 10 centimes (about 1 per cent.) on May figures. Considering the somewhat lower quotations prevailing for Pará sorts, as well as the small demand from manufacturers for that time of the year, the results realized were very satisfactory. Especially fine and well conditioned sorts maintained their values. The United States seemed not to have sent any buying orders worth mentioning. At the inscription sale on July 19 the exceptionally small quantity of 133 tons will be exposed, the most important lots being (with brokers' estimations in francs per kilogram):

25 tons Ule strips.....	10.75	4 tons Mongalla strips ..	10.25
7 " Batouri.....	10.60	6 " Flangi, red strips... 8.50	
6 " Lac Leopold.....	10.75	8 " Upper Congo ball... 11.50	

Since July 1 about 327 tons have been sold. Stocks in first hands are about 550 tons. The steamer *Leopoldville* from the Congo has brought about 407 tons.

C. SCHMID & CO., SUCCESEURS.

Antwerp, July 11, 1905.

## RUBBER ARRIVALS AT ANTIWERP.

JUNE 27.—By the *Leopoldville*, from the Congo:

Bunge & Co.....	(Société Générale Africaine) kilos.	210,000	
Do .....	.....	11,000	
Do .....	Société A B I R .....	36,000	
Do .....	(Chemins de fer Grand Lacs) .....	30,000	
Do .....	(Comité Special Katanga) .....	9,000	
Do .....	(Cie. du Kasai) .....	90,000	
Comptoir Commercial Congolais.....	.....	4,000	
Société General de Commerce.....	(Alimaïenne) .....	1,000	
Société Coloniale Anversoise.....	(La Lulunga) .....	2,000	
Do .....	(Belge du Haut Congo) .....	5,000	
Do .....	.....	700	
L. & W. Van de Velde.....	.....	1,000	
Cie Commerciale des Colonies... (La Haut Sangha)	.....	8,000	407,700

JULY 17.—By the *Philippeville*, from the Congo:

Bunge & Co.....	(A B I R) kilos	37,000	
Do .....	(Société Générale Africaine) .....	179,000	
Do .....	(Chemins de fer Grand Lacs) .....	10,800	
Do .....	(Comité Special Katanga) .....	2,800	
Do .....	(Société "La Kotto") .....	3,000	
Do .....	(Sultanats du Haut Ubangi) .....	20,700	
Comptoir Commercial Congolais.....	.....	4,200	
M. S. Cols.....	(Société Baniembe) .....	1,000	
Do .....	(Alima) .....	3,600	

## PARA RUBBER VIA EUROPE.

## POUNDS

JUNE 26.—By the *Martinez*=Cuddad Bolivar:

Thebaud Brothers (Fine) .....	10,000	
Thebaud Brothers (Coarse) .....	2,000	
Middleton & Co. (Coarse) .....	2,000	15,000

JUNE 26.—By the *Oceana*=Liverpool:

A. T. Morse & Co. (Coarse).....	5,000	
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JUNE 26.—By the *Superior*=Colon:

F. Rosenstein & Co. (Fine) .....	1,000	
R. D. Evans (Fine) .....	1,000	
Flint & Co. (Cauchol).....	6,500	8,000

JUNE 26.—By the *Martinez*=Liverpool:

Poel & Arnold (Cauchol) .....	15,000	
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JUNE 26.—By the *Granada*=Cuddad Bolivar:

Thebaud Brothers (Fine) .....	8,000	
Thebaud Brothers (Coarse) .....	4,500	
Middleton & Co. (Fine) .....	1,500	
Middleton & Co. (Coarse) .....	5,000	
G. Amsinck & Co. (Coarse) .....	6,000	31,000

JUNE 26.—By the *Granada*=Liverpool:

New York Commercial Co. (Fine) .....	2,000	
A. T. Morse & Co. (Coarse) .....	1,500	13,000

## OTHER ARRIVALS IN NEW YORK.

## CENTRALS.

## POUNDS.

JUNE 26.—By the *Bayamo*=Tuspan:

H. Marquardt & Co. ....	2,000	
Harburger & Stack .....	500	2,500

JUNE 26.—By the *El Paso*=New Orleans:

Manhattan Rubber Mfg Co. ....	2,200	
A. T. Morse & Co. ....	1,500	3,500

JUNE 26.—By the *Altai*=Colombia:

D. A. De Lima & Co. ....	1,500	
J. Porto .....	1,500	
Eggers & Heinlein .....	1,000	
United Fruit Co. ....	700	
Isaac Brandon & Bros .....	700	
A. D. Straus & Co. ....	600	5,700

JUNE 27.—By the *Mesaba*=London:

George A. Alden & Co. ....	1,000	
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JUNE 26.—By the *Segurana*=Colon:

Meyer Hecht .....	1,200	
A. Rosenblatt & Sons .....	1,000	
J. A. Medina & Co. ....	600	
Isaac Brandon & Bros .....	900	
M. J. & Kinton .....	500	4,200

JULY 1.—By the *Niagara*=Mexico:

Harburger & Stack .....	2,000	
Griffin Hinkley & Co. ....	1,000	
E. N. Libals Co. ....	600	
Sargis & Cummings .....	600	4,200

Société Coloniale Anversoise.....	(Cie. du Kasai)	98,500	
Do .....	(Sud Kamerun) .....	3,700	
Do .....	(Belge du Haut Congo) .....	10,400	
Do .....	.....	700	
G. & C. Kreglinger.....	(Société La Lobay) .....	14,000	
Société Generale de Commerce.....	(Alimaïenne) .....	2,900	
Charles Dethier.....	(Société La M'Poko) .....	10,000	
Comptoir des Produits Coloniaux.....	(Société "N'Goko") .....	7,400	409,700

GRISAR & Co., so long established as rubber brokers, announce under date of July 1: "We beg to inform you that we have on this day granted power of attorney for our firm to Mr. Gustave Grisar, son of our partner, Mr. Max Grisar, and for several years a co-worker in our firm."

## IMPORTS FROM PARA AT NEW YORK.

[The Figures Indicate Weights in Pounds.]

July 5.—By the steamer *Amazonense*, from Manãos and Pará:

IMPORTERS.	Fine.	Medium.	Coarse.	Cauchol.	Total.
New York Commercial Co.	16,100	3,700	16,000	4,000=	39,800
Poel & Arnold.....	.....	.....	52,100	6,100=	58,200
A. T. Morse & Co. ....	1,000	.....	36,800	1,000=	38,800
General Rubber Co.....	2,500	400	21,600	8,300=	32,800
Neale & Co. ....	9,800	1,300	11,400	.....=	22,500
G. Amsinck & Co. ....	7,300	.....	5,000	.....=	12,300
Lionel Hagenaers & Co. ....	4,700	.....	1,200	.....=	5,900
Hagemeyer & Brunn.....	2,000	1,400	.....	.....=	3,400
Total .....	43,400	6,800	144,100	19,400=	213,700

July 17.—By the steamer *Cearense*, from Pará:

New York Commercial Co.	13,600	2,600	37,000	.....=	53,200
A. T. Morse & Co. ....	400	300	42,300	16,400=	59,400
Poel & Arnold.....	.....	.....	39,400	.....=	39,400
Lawrence Johnson & Co.	4,400	2,300	2,600	.....=	9,300
Hagemeyer & Brunn.....	2,100	.....	3,600	.....=	5,700
General Rubber Co. ....	.....	.....	.....	6,300=	6,300

Total.. .. 20,500 5,200 144,900 22,700= 173,300

July 24.—By the steamer *Hubert*, from Manãos and Pará:

New York Commercial Co.	53,800	17,100	43,100	3,800=	117,800
A. T. Morse & Co. ....	4,900	700	34,200	5,800=	45,600
Poel & Arnold.....	3,600	300	34,100	2,400=	40,400
General Rubber Co.....	900	100	200	37,500=	38,700
G. Amsinck & Co. ....	17,800	.....	6,500	.....=	24,300
Neale & Co. ....	5,100	600	1,700	.....=	7,400
Lionel Hagenaers & Co.	6,000	.....	1,100	.....=	7,100
Edmund Reeks & Co....	.....	.....	.....	4,200=	4,200
Total.....	92,100	18,800	120,900	53,700=	285,500

[NOTE.—The steamer *Dominic*, from Pará, is due at New York August 4, with 100 tons Rubber.]

JULY 5.—By the *Georgic*=Liverpool:

J. H. Rossbach & Bros .....	33,000	
Hirsch & Kaiser .....	10,000	43,000

JULY 5.—By the *Sarnia*=Colombia:

K. Mandell & Co.....	500	
Eggers & Heinlein.....	1,500	
Roldan Van Sickle.....	1,000	
A. S. Lascellas & Co.....	1,000	
Isaac Brandon & Bros.....	600	4,600

JULY 5.—By the *Advance*=Colon:

G. Amsinck & Co.....	11,200	
American Trading Co.....	5,600	
Lawrence Johnson & Co.....	4,100	
E. B. Strout .....	3,700	
Roldan & Van Sickle.....	3,100	
A. M. Capen Sons.....	3,100	
Dumarest Bros. & Co.....	2,700	
A. Santos & Co.....	2,100	
Mecke & Co.....	1,700	
De Sola & Pardo.....	1,300	
Charles E. Griffin.....	1,000	
Isaac Brandon & Bros.....	900	
W. Loaliza & Co.....	600	
Silva, Bussenius & Co.....	600	
Hirzel, Feltman & Co.....	500	42,200

JULY 5.—By the *Tintoretto*=Bahia:

Hirsch & Kaiser.....	40,000	
J. H. Rossbach & Bros.....	11,500	
A. D. Hitch & Co.....	9,000	
American Commercial Co.....	11,500	72,000

JULY 6.—By the <i>Seneca</i> =Tampico. For Havre .....	69,000	
JULY 8.—By the <i>Yucatan</i> =Mexico:		
H. Marquardt & Co .....	2,500	
Harburger & Stack .....	2,000	
Thebaud Brothers .....	1,000	
E. Steiger & Co .....	700	
Graham, Hinkley & Co .....	600	6,800
JULY 8.—By the <i>Barbarossa</i> =Bremen:		
J. H. Rossbach & Bros .....	13,500	
JULY 8.—By the <i>El Dorado</i> =New Orleans:		
Manhattan Rubber Mfg. Co .....	2,500	
G. Amsinck & Co .....	1,500	
E. B. Strout .....	1,300	
A. N. Rotholz .....	1,200	6,500
JULY 10.—By the <i>St. Louis</i> =London:		
Hirsch & Kaiser .....	30,000	
J. H. Rossbach & Bros .....	15,500	45,500
JULY 10.—By the <i>Minnehaha</i> =London:		
General Rubber Co .....	15,500	
JULY 12.—By the <i>Allanca</i> =Colon:		
G. Amsinck & Co .....	4,900	
J. A. Medina & Co .....	3,400	
Mann & Emdon .....	1,600	
Eggers & Heinlein .....	1,200	
A. Rosenthal's Sons .....	1,100	
American Trading Co .....	1,200	
E. B. Strout .....	700	14,100
JULY 13.—By the <i>Alleghany</i> =Colombia:		
Banco de Exportasos .....	1,500	
G. Amsinck & Co .....	1,300	
Kunhardt & Co .....	800	
Punderford & Co .....	700	
D. A. De Lima & Co .....	500	4,800
JULY 14.—By the <i>Monterey</i> =Mexico:		
E. Steiger & Co .....	1,500	
Harburger & Stack .....	1,000	
H. Marquardt & Co .....	1,000	
American Trading Co .....	500	4,000
JULY 17.—By the <i>Proteus</i> =New Orleans:		
A. T. Morse & Co .....	4,500	
Manhattan Rubber Mfg Co .....	500	
Eggers & Heinlein .....	500	5,500
JULY 17.—By the <i>Minnetonka</i> =London:		
General Rubber Co .....	30,000	
JULY 19.—By the <i>Siberia</i> =Colombia:		
Lawrence Johnson & Co .....	1,200	
United Fruit Co .....	600	
Silva Bussenius & Co .....	500	
G. Amsinck & Co .....	1,000	
Pedro A. Lopez .....	600	
European Option .....	3,500	7,400
JULY 21.—By the <i>Carib II</i> =Truxillo:		
Eggers & Heinlein .....	8,000	
H. W. Peabody & Co .....	1,000	9,000
JULY 21.—By the <i>City of Savannah</i> =Colon:		
Hirzel, Feltman & Co .....	8,200	
G. Amsinck & Co .....	7,400	
Piza, Nephews & Co .....	4,400	
Mann & Emdon .....	2,500	
Lawrence Johnson & Co .....	2,500	
Dumarest Bros. & Co .....	1,700	
E. B. Strout .....	1,700	
A. Santos & Co .....	1,400	
A. M. Capen's Sons .....	1,300	
W. R. Grace & Co .....	1,200	
American Trading Co .....	1,100	
A. Rosenthal's Sons .....	1,000	
Isaac Kuble & Co .....	500	
Lanman & Kemp .....	500	35,400
JULY 22.—By the <i>Esperanza</i> =Mexico:		
E. Steiger & Co .....	2,000	
E. N. Tibbals & Co .....	1,000	
W. L. Wadleigh .....	1,200	
George A. Teslar .....	500	
Graham Hinkley & Co .....	500	5,200
JULY 22.—By the <i>El Monte</i> =New Orleans:		
A. T. Morse & Co .....	2,500	
JULY 24.—By the <i>Finance</i> =Colon:		
Hirzel, Feltman & Co .....	5,500	
Mann & Emdon .....	1,500	
G. Amsinck & Co .....	1,000	
E. B. Strout .....	600	8,600

## AFRICANS.

JUNE 26.—By the <i>Celtic</i> =Liverpool:		
Wallace L. Gough .....	11,500	
JUNE 27.—By the <i>Zeeland</i> =Antwerp.		
Rubber Trading Co .....	3,500	
JUNE 29.—By the <i>Oceanic</i> =Liverpool:		
Rubber Trading Co .....	9,000	
A. W. Brunn .....	2,500	11,500

JUNE 30.—By the <i>Graf Waldersee</i> =Hamburg:		
Rubber Trading Co .....	20,000	
Poel & Arnold .....	10,000	30,000
JULY 3.—By the <i>La Gascogne</i> =Havre.		
George A. Alden & Co .....	11,500	
General Rubber Co .....	5,500	17,000
JULY 3.—By the <i>Umbria</i> =Liverpool:		
Poel & Arnold .....	65,000	
JULY 5.—By the <i>Peninsula</i> =Lisbon:		
Poel & Arnold .....	15,000	
General Rubber Co .....	44,000	59,000
JULY 8.—By the <i>Batavia</i> =Hamburg:		
A. T. Morse & Co .....	11,500	
JULY 8.—By the <i>La Savoie</i> =Havre.		
George A. Alden & Co .....	7,000	
Poel & Arnold .....	4,500	11,500
JULY 8.—By the <i>Luania</i> =Liverpool:		
George A. Alden & Co .....	6,000	
A. T. Morse & Co .....	2,500	8,500
JULY 11.—By the <i>Vaderland</i> =Antwerp:		
Poel & Arnold .....	35,000	
JULY 13.—By the <i>Pennsylvania</i> =Hamburg:		
Poel & Arnold .....	22,000	
A. T. Morse & Co .....	25,000	
George A. Alden & Co .....	9,000	56,000
JULY 14.—By the <i>Cedric</i> =Liverpool:		
General Rubber Co .....	45,000	
Rubber Trading Co .....	2,500	47,500
JULY 17.—By the <i>La Bretagne</i> =Havre:		
General Rubber Co .....	27,000	
JULY 17.—By the <i>Etruria</i> =Liverpool:		
George A. Alden & Co .....	11,500	
Wallace L. Gough .....	9,000	
A. W. Brunn .....	2,500	23,000
JULY 18.—By the <i>Kroontind</i> =Antwerp:		
George A. Alden & Co .....	55,000	
Winter & Smillie .....	9,000	64,000
JULY 21.—By the <i>Baltic</i> =Liverpool:		
A. T. Morse & Co .....	27,000	
Joseph Cantor .....	3,500	30,500
JULY 21.—By the <i>Rhaetia</i> =Hamburg:		
A. T. Morse & Co .....	22,500	
JULY 22.—By the <i>Campama</i> =Liverpool:		
Henry A. Gould Co .....	4,500	

## EAST INDIAN.

JUNE 24.—By the <i>Crotafels</i> =Calcutta:		
George A. Alden & Co .....	8,500	
JUNE 27.—By the <i>Mesaba</i> =London:		
George A. Alden & Co .....	7,500	
Wallace L. Gough .....	2,000	9,500
JUNE 28.—By the <i>Schuykill</i> =Singapore:		
Poel & Arnold .....	22,500	
Robert Brans & Co .....	22,500	
Rubber Trading Co .....	10,000	
George A. Alden & Co .....	15,000	
Heabler & Co .....	30,000	
Winter & Smillie .....	33,000	
Wallace L. Gough .....	5,000	138,000
JULY 3.—By the <i>Umbria</i> =Liverpool:		
Poel & Arnold .....	4,500	
JULY 5.—By the <i>Gordon Casile</i> =Calcutta:		
Poel & Arnold .....	13,000	
A. T. Morse & Co .....	7,000	20,000
JULY 7.—By the <i>Lowther Castle</i> =Singapore:		
Poel & Arnold .....	34,000	
Robert Brans & Co .....	25,000	59,000
JULY 12.—By the <i>Hudson</i> =Singapore:		
Poel & Arnold .....	30,000	
Pierre T. Betts .....	22,000	52,000
JULY 15.—By the <i>Philadelphia</i> =London:		
Poel & Arnold .....	4,500	
JULY 17.—By the <i>Indrani</i> =Singapore:		
Pierre T. Betts .....	7,000	
JULY 19.—By the <i>Crosby Hall</i> =Calcutta:		
George A. Alden & Co .....	3,000	
Poel & Arnold .....	3,500	6,500
JULY 21.—By the <i>Carpattia</i> =Liverpool:		
Poel & Arnold .....	2,500	

## GUTTA-JELUTONG.

JUNE 28.—By the <i>Schuykill</i> =Singapore:		
Poel & Arnold .....	290,000	
George A. Alden & Co .....	260,000	

Pierre T. Betts .....	1,000,000	
Wallace L. Gough .....	300,000	
Robinson & Tallman .....	150,000	
Rubber Trading Co .....	70,000	
Windmuller & Reolker .....	110,000	
Heabler & Co .....	195,000	
J. W. Phylle & Co .....	100,000	
Robert Brans & Co .....	50,000	1,775,000
JULY 7.—By the <i>Lowther Castle</i> =Singapore:		
Robert Brans & Co .....	240,000	
Heabler & Co .....	250,000	
George A. Alden & Co .....	200,000	
Pierre T. Betts .....	170,000	
Poel & Arnold .....	150,000	1,010,000
JULY 12.—By the <i>Hudson</i> =Singapore:		
Heabler & Co .....	210,000	
J. W. Phylle & Co .....	200,000	
Robinson & Tallman .....	200,000	
Poel & Arnold .....	135,000	
Wallace L. Gough .....	135,000	
George A. Alden & Co .....	75,000	955,000
JULY 17.—By the <i>Indrani</i> =Singapore:		
Robert Brans & Co .....	165,000	
J. W. Phylle & Co .....	150,000	
George A. Alden & Co .....	85,000	
Robinson & Tallman .....	85,000	485,000

## GUTTA-PERCHA AND BALATA.

JUNE 23.—By the <i>Schuykill</i> =Singapore:		
Winter & Smillie .....	6,000	
JUNE 30.—By the <i>Waldersee</i> =Hamburg:		
To Order .....	7,000	
JULY 7.—By the <i>Lowther Castle</i> =Singapore:		
George A. Alden & Co .....	30,000	
JULY 8.—By the <i>Batavia</i> =Hamburg:		
To Order .....	13,500	
JULY 13.—By the <i>Pennsylvania</i> =Hamburg:		
To Order .....	7,000	
JULY 17.—By the <i>Indrani</i> =Singapore:		
D. Brandt & Co .....	13,000	
JULY 21.—By the <i>Rhaetia</i> =Hamburg:		
John Kronke .....	6,500	
BALATA.		
JUNE 30.—By the <i>Parina</i> =Demerara, etc.:		
Charles P. Shilstone .....	3,500	
Frame & Co .....	2,500	
Maitland, Coppell & Co .....	1,500	7,500
JULY 3.—By the <i>Umbria</i> =Liverpool:		
Henry A. Gould .....	8,000	
JULY 11.—By the <i>Randam</i> =Rotterdam:		
George A. Alden & Co .....	2,000	
JULY 19.—By the <i>Korona</i> =Demerara:		
Charles P. Shilstone .....	6,000	
JULY 20.—By the <i>Grenada</i> =Culdad Bolivar:		
Thebaud Brothers .....	15,000	

## CUSTOM HOUSE STATISTICS.

## PORT OF NEW YORK—JUNE.

Imports:	POUNDS.	VALUE
India-rubber .....	3,552,129	\$2,500,887
Gutta-percha .....	54,040	21,337
Gutta-jelutong (Pontianak) ..	1,898,952	63,242
Total .....	5,505,121	\$2,585,466
Exports:		
India-rubber .....	81,571	\$63,277
Reclaimed rubber .....	441,566	45,562
Rubber Scrap Imported .....	722,835	\$49,191

## BOSTON ARRIVALS.

	POUNDS.	
JUNE 3.—By the <i>Sachem</i> =Liverpool:		
George A. Alden & Co.—African .....	12,330	
JUNE 13.—By the <i>Deacon</i> =Liverpool:		
George A. Alden & Co.—African .....	16,792	
JUNE 21.—By the <i>Canadian</i> =Liverpool:		
George A. Alden & Co.—African .....	24,667	
JUNE 30.—By the <i>Invernia</i> =Liverpool:		
J. L. Odell. African .....	4,425	
Total .....	58,214	

[Value, \$40,191.]



EXPORTS OF INDIA-RUBBER FROM PARA AND MANAOS (IN KILOGRAMS).  
(INCLUDING IQUITOS) DURING THE FIRST HALF OF 1905

EXPORTERS.	UNITED STATES.					EUROPE.					TOTAL
	FINE.	MEDIUM.	COARSE.	CAUCHO.	TOTAL.	FINE.	MEDIUM.	COARSE.	CAUCHO.	TOTAL.	
Cmok, Schrader & Co. }											
Dusendschön & Co. }	1,231,127	338,542	708,991	302,781	2,671,441	2,102,337	238,813	555,832	1,264,202	4,161,184	6,832,625
Adelbert H. Alden. . . . .	1,332,380	320,840	718,107	246,130	2,626,472	447,580	77,578	148,271	177,905	851,934	3,478,406
Witt & Co. . . . .	692,096	157,970	231,572	375,800	1,457,457	550,565	93,020	105,117	309,163	1,117,877	2,575,332
Da Costa & Co. . . . .	98,154	18,150	389,422	67,126	572,851	268,536	26,376	173,977	218,766	687,655	1,260,516
Gordon & Co. . . . .	408,131	97,901	145,084	243,235	981,454	—	—	—	—	—	981,454
Neale & Staats. . . . .	185,132	31,648	208,124	12,338	437,242	182,317	30,933	60,782	227,892	501,924	939,166
J. Marques & Co. . . . .	93,723	3,400	110,611	6,254	219,988	176,179	7,253	92,379	28,255	304,066	524,054
R. Suarez & Co. . . . .	—	—	—	—	—	349,779	2,400	61,631	41,067	454,868	454,868
F. C. Aranã. . . . .	—	—	51	100,940	100,991	20,583	3,256	3,992	106,993	134,824	235,815
Pires, Teixeira & Co. . . . .	68,963	—	49,895	—	118,858	75,641	123	31,661	2,216	109,641	228,499
J. H. Andresen, Successors. . . . .	13,608	4,353	6,749	8,058	32,768	62,029	25,043	31,981	28,791	147,844	180,612
S'hurst Brocklehurst & Co. }	—	—	2,700	—	2,700	90,350	7,503	12,966	40,115	150,934	162,634
Brocklehurst & Co. . . . .	—	—	—	—	—	70,836	13,340	37,796	44,815	166,787	166,787
Kahn, Polack & Co. . . . .	—	—	—	—	—	19,546	1,615	6,515	930	28,606	83,540
Kanthack & Co. . . . .	18,537	6,625	7,813	21,959	54,934	32,758	8,723	10,555	5,003	57,039	57,039
Denis Crouan & Co. . . . .	—	—	—	—	—	—	—	—	—	—	—
J. A. Mendes & Co. . . . .	3,267	336	45,696	—	49,299	—	—	—	—	—	49,299
Marius & Levy. . . . .	—	—	—	—	—	13,790	2,465	2,258	26,233	44,746	44,746
Luiz Schill & Sobrinhos. . . . .	—	—	—	—	—	25,333	5,102	8,183	3,655	42,273	42,273
B. A. Antunes & Co. . . . .	591	730	655	11,763	13,739	1,280	320	1,320	17,726	20,646	34,385
Reeks & Astlett. . . . .	8,480	1,440	1,920	4,889	16,729	—	—	—	—	—	16,729
Sundry small shippers. . . . .	17,287	4,870	8,718	—	30,875	39,630	1,906	9,176	28,116	78,918	109,793
Direct from Iquitos. . . . .	6,233	169	11,351	10,409	28,162	247,618	22,488	279,655	726,383	1,276,144	1,304,306
Total January-June, 1905. . . . .	4,264,718	996,093	2,653,159	1,501,700	9,415,670	4,785,978	568,657	1,694,047	3,298,226	10,346,908	19,762,578
Total January-June, 1904. . . . .	4,195,045	919,923	2,700,556	1,090,398	8,905,922	3,602,150	507,925	1,437,106	2,561,609	8,408,790	17,314,712
Total January-June, 1903. . . . .	4,073,517	1,038,149	2,726,135	1,036,078	8,873,879	4,803,518	589,529	1,328,363	2,282,155	9,003,565	17,877,444
Total January-June, 1902. . . . .	3,871,260	967,250	2,351,918	994,532	8,184,960	4,511,911	903,549	1,405,646	1,567,998	8,449,104	16,634,064
Total January-June, 1901. . . . .	4,868,612	1,131,774	2,401,598	1,111,084	9,513,068	3,353,916	732,916	1,408,662	1,980,886	7,476,380	16,989,448

OFFICIAL STATISTICS OF CRUDE INDIA-RUBBER (IN POUNDS).

UNITED STATES.				GREAT BRITAIN.			
MONTHS.	IMPORTS.	EXPORTS.	NET IMPORTS.	MONTHS.	IMPORTS.	EXPORTS.	NET IMPORTS.
May, 1905. . . . .	3,532,513	219,213	3,313,300	May, 1905. . . . .	6,079,584	2,590,784	3,488,800
January-April. . . . .	32,606,023	1,134,713	31,471,310	January-April. . . . .	21,770,608	12,835,006	8,941,512
Five months, 1905. . . . .	36,138,536	1,353,926	34,784,610	Five months, 1905. . . . .	27,856,192	15,425,880	12,430,312
Five months, 1904. . . . .	31,994,123	1,461,909	30,532,214	Five months, 1904. . . . .	26,208,896	15,310,070	10,898,826
Five months, 1903. . . . .	28,215,766	1,355,007	26,860,759	Five months, 1903. . . . .	24,886,400	17,354,512	7,531,888
GERMANY.				ITALY.			
MONTHS.	IMPORTS.	EXPORTS.	NET IMPORTS.	MONTHS.	IMPORTS.	EXPORTS.	NET IMPORTS.
May, 1905. . . . .	4,108,500	1,230,040	2,868,460	May, 1905. . . . .	200,640	46,640	154,000
January-April. . . . .	14,879,480	4,874,540	10,004,940	January-April. . . . .	533,230	70,400	462,880
Five months, 1905. . . . .	18,987,980	6,113,580	12,874,400	Five months, 1905. . . . .	733,920	117,040	616,880
Five months, 1904. . . . .	15,022,260	4,281,280	10,737,980	Five months, 1904. . . . .	738,100	49,280	688,820
Five months, 1903. . . . .	16,059,120	6,087,820	9,969,300	Five months, 1903. . . . .	812,020	26,400	785,620
FRANCE.*				AUSTRIA-HUNGARY.			
MONTHS.	IMPORTS.	EXPORTS.	NET IMPORTS.	MONTHS.	IMPORTS.	EXPORTS.	NET IMPORTS.
May, 1905. . . . .	2,142,140	1,185,580	956,560	May, 1905. . . . .	337,920	9,680	328,240
January-April. . . . .	10,216,580	5,599,000	4,617,580	January-April. . . . .	980,760	2,860	977,900
Five months, 1905. . . . .	12,358,720	6,784,580	5,574,140	Five months, 1905. . . . .	1,318,680	12,540	1,306,140
Five months, 1904. . . . .	9,274,320	5,946,820	3,327,500	Five months, 1904. . . . .	1,273,580	10,340	1,263,240
Five months, 1903. . . . .	6,804,160	3,879,480	2,924,680	Five months, 1903. . . . .	1,294,700	12,320	1,282,380
BELGIUM.†							
MONTHS.	IMPORTS.	EXPORTS.	NET IMPORTS.				
May, 1905. . . . .	1,109,642	1,242,248	[1,132,603]				
January-April. . . . .	6,272,223	4,767,729	2,195,494				
Five months, 1905. . . . .	7,381,865	3,187,774	2,062,891				
Five months, 1904. . . . .	7,963,093	3,777,111	1,656,932				
Five months, 1903. . . . .	6,513,084	4,762,335	1,710,149				

NOTE.—German statistics include Gutta-percha, Balata, old rubber, and substitutes. French, Austrian, and Italian figures include Gutta-percha. The exports from the United States embrace the supplies for Canadian consumption.

\* General Commerce

† Special Commerce.

‡ Net Exports.

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ROBERT B. BAIRD, VICE PRESIDENT

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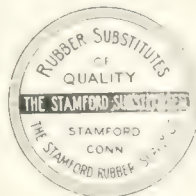
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**BATTELLE & RENWICK**  
163 Front St., New York.



*Show High Grade Substitutes*





Established 1880

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Philadelphia  
Rubber Works  
Reclaimed  
Rubber

Philadelphia  
U. S. A.

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Foreign Representatives:

For Great Britain  
Kuhn & Co.,

31 Lombard Street, London, E. C.

For the Continent

H. P. Moorhouse,

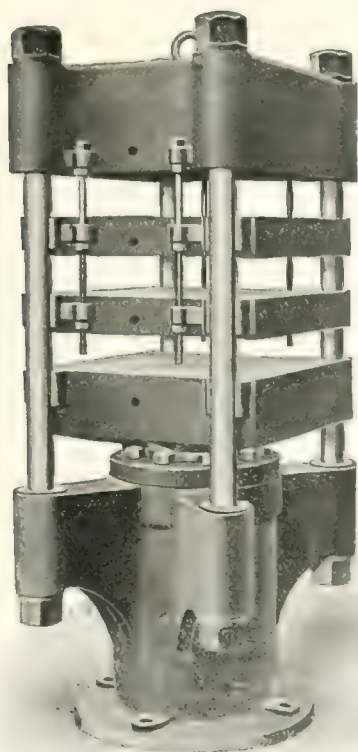
29, Rue des Petites Écuries, Paris.

## Dixon's Graphite Gear Grease

Prevents NOISE  
Prevents WEAR  
SAVES MONEY  
SAMPLES  
FREE

Joseph Dixon Crucible Co., Jersey City, N. J.

## Hydraulic Steam Presses



All sizes and  
styles.

Molds of every  
description,  
nothing too  
small, nothing  
too large or  
complicated.  
Castings for iron  
work of every  
description.  
Let us figure  
with you.

**A. Adamson**  
Akron, O.

*Mention The India Rubber World when you write.*

## WILLIAM R. THROPP

Manufacturer of

Rubber Washers, Grinders, Warmers,  
Sheeters, Refiners and Calenders  
AUTOMATIC JAR RING CUTTING LATHES  
Hydraulic, Steam and Knock Screw Presses  
IMPROVED DUCK SLITTERS  
Vulcanizers of all diameters and lengths  
Automobile & Vehicle Moulds a Specialty  
MOULDS AND SPECIAL MACHINERY  
TRENTON, N. J., U. S. A.

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7,000 MILES

and still in  
good condition.



THE MOST  
ALL-ROUND

Satisfactory Tyres.

Messrs. Thomas Ash & Sons, of Queen Street, Cardiff  
write on Oct. 24th, 1904, re CLINCHER TYRES.

"The set of Tyres you supplied us for our De Dion  
Car have given perfect satisfaction. They have  
done over 7,000 miles, and with the exception of a  
few cuts they are still in very good condition. We  
can certainly recommend your Tyres if you keep up to  
this standard."

EQUALLY GOOD FOR HEAVY CARS.

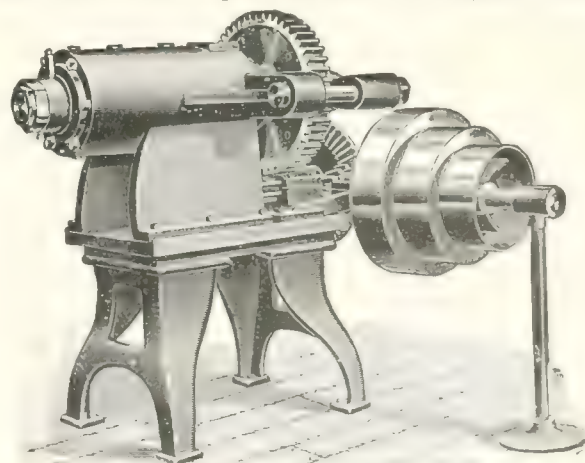
Sole Manufacturers:

**THE NORTH BRITISH RUBBER CO., Ltd.,**  
Castle Mills: EDINBURGH, SCOTLAND.

*Mention The India Rubber World when you write.*

## CLARK'S Reliable Tubing Machine

FOR THE MANUFACTURE OF RUBBER TUBING AND CORD,  
And also the Covering of Electrical and Telephone Cables.



MANUFACTURED IN 4 SIZES BY

**EDRED W. CLARK, MACHINIST,**

Rubber Moulds and Rubber Machinery, Screw and Hydraulic Presses a Specialty

No. 31 WELLS STREET, HARTFORD, CONN.

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THEO. S. BASSETT, President.  
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# U. S. RUBBER RECLAIMING WORKS.

## Manufacturers of RECLAIMED RUBBER.

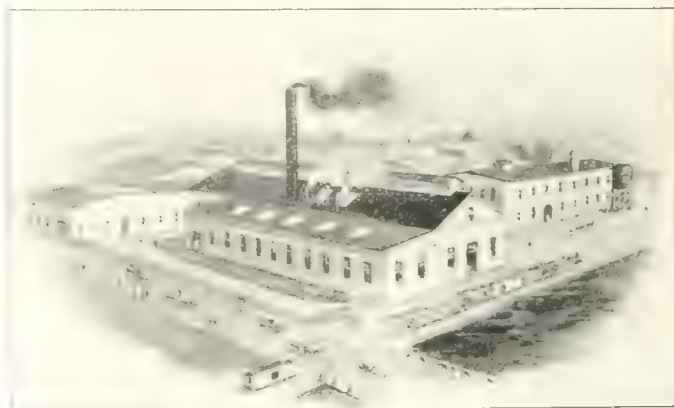
Offices: No. 127 DUANE STREET, NEW YORK.



FACTORY AT BUFFALO, N. Y.



FACTORY No. 1, SHELTON, CONN.



FACTORY No. 2, SHELTON, CONN.

FOREIGN REPRESENTATIVES:

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*See The India Rubber World for more details.*

# DRYERS AND WATER SEPARATORS

—FOR—

## RECLAIMED RUBBER

AUTOMATIC AND ECONOMICAL  
PRODUCES HIGHER GRADE MATERIAL  
AT LOWER COST AND MORE EFFICIENT.

Installed in the  
Largest Reclaiming Plants in the World.

## AMERICAN PROCESS CO.,

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*Mention The India Rubber World when you write.*

## Embossing Calenders

For Artificial Leather, Table Oil Cloth,  
and Carriage Covers.

## Drying Machines

with Copper Cylinders for Cotton Duck,  
Drills and Sheeting.

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Southern Agent, STUART W. CRAMER,

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Equitable Bldg., Atlanta, Ga.

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## HOLMES BROS. MAKERS OF RUBBER MOLDS

And Special Machinery for Rubber Factories

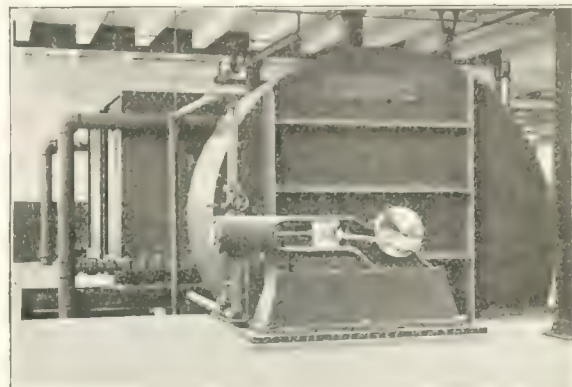
Mandrels, Cutting Gauges, Lathe Knives, Hand and Foot  
Presses, Calender Attachments, Stock Cutting Machines,  
Tubing Machine Dies and Pins, Trimming Dies, Hand  
Stitchers and Rollers, Experimental Mills, Etc.

73-75 WEST JACKSON BOULEVARD  
CHICAGO, ILL.

*Mention The India Rubber World when you write.*

## "TO BE FOREWARNED IS TO BE FOREARMED"

is never better exemplified than by the man who, while the heat of summer oppresses, prepares for winter's chilly blasts. It's none too soon to consider the advantages of the Sturtevant Blower System, with its centralized heating coils utilizing exhaust steam, its positive distribution of air and its generous ventilation.



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General Offices and Works: Hyde Park, Mass.

NEW YORK. PHILADELPHIA. CHICAGO. LONDON.

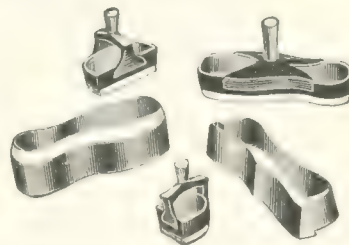
Designers and Builders of Heating, Ventilating, Drying and  
Mechanical Draft Apparatus; Fans, Blowers and Exhausters;  
Steam Engines, Electric Motors and Generating Sets; Fuel Econ-  
omizers; Forges, Exhaust Heads, Steam Traps, etc.

451

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MOLDS,  
Cutting Dies,  
Label Dies  
and Plates.

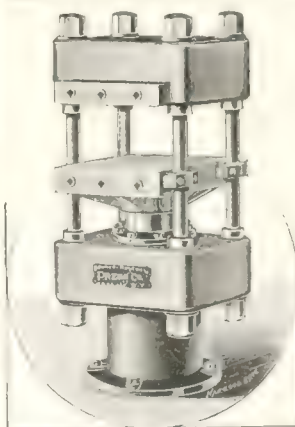


Hand Rollers,  
and  
Stitchers,  
Sheet Rubber  
Spring Gauge,  
Etc., Etc.

**THE HOGGSON & PETTIS MFG. CO.,**

NEW HAVEN, CONN., U. S. A.

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◆ FOR ◆

MECHANICAL GOODS.

HYDRAULIC OR . . .

KNUCKLE JOINT.

WRITE FOR PRICES.

**BOOMER & BOSCHERT PRESS CO.,**

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# AITON MACHINE COMPANY

## ENGINEERS and MACHINISTS

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ARTHUR S. BEVES, Secretary and Treasurer

126 LIBERTY STREET

NEW YORK

Factory: HARRISON, N. J.

Manufacturers of

## RUBBER MILL MACHINERY

## CALENDERS, WASHERS, ETC.

DRYING AND VULCANIZING APPARATUS.

Cabling and Insulating Machinery. Hydraulic Machines.

Builders of Heavy Machinery.

High Grade and Large Castings a Specialty.

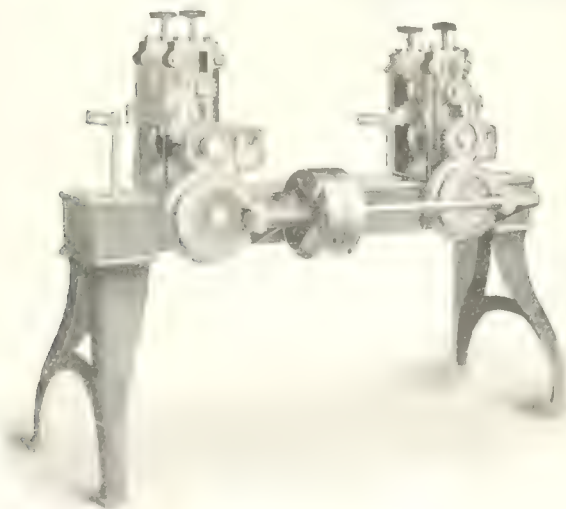
INQUIRIES SOLICITED.

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# NEW ENGLAND BUTT COMPANY,

## PROVIDENCE, RHODE ISLAND.

MANUFACTURERS OF MACHINERY.



Rubber Strip Covering Machines  
For Covering Electrical Wires.

Strip Cutters and Rubber  
Spreading Machines.

Braiders for Covering Rubber Hose.

Complete Line of Machinery for Insu-  
lating Electrical Wires and Cables.

TWO HEAD RUBBER MILL MACHINERY.

## FINE CASTINGS A SPECIALTY.

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ESTABLISHED 1848.

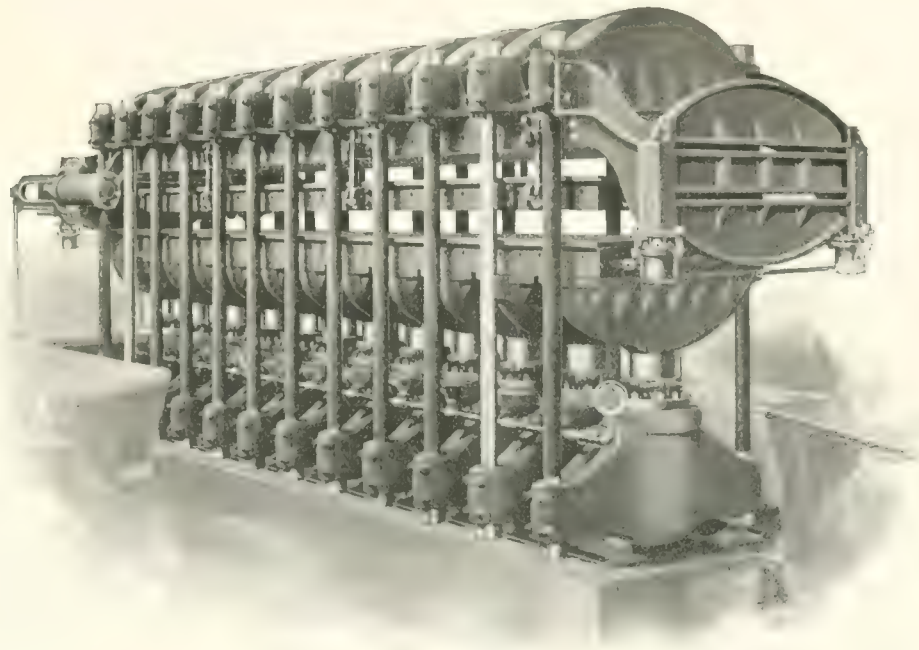
# Farrel Foundry and Machine Co.,

Largest Manufacturers in the World of \_\_\_\_\_

# Rubber Machinery.

FRANKLIN FARREL, PRES.  
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ANSONIA, CONN., U. S. A.



STANDARD THREE-PLATEN BELT PRESS.  
BUILT WITH ANY SIZE AND NUMBER OF PLATENS

CALENDERS, GRINDERS, MIXERS, CRACKERS, WASHERS,  
WARMERS and REFINERS.

HYDRAULIC BELT PRESSES, with Hydraulic Stretchers,  
MULTIPLE, HEEL and SCREW PRESSES, PUMPS,  
ACCUMULATORS and FITTINGS.

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LINOLEUM MACHINERY—Calenders, Grinders, Mixers, etc.  
Cabling, Winding, Spooling and Measuring Machines for Insulated Wire.  
Chilled Iron and Sand Rolls of all sizes, Steel and Wrought Iron Rolls.  
Shafting, Machine Moulded Gearing, Friction Clutches, etc.

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# HIDALGO

A RUBBER AND COFFEE INVESTMENT  
PAYING SIX PER CENT. INTEREST  
ON INSTALLMENT AND CASH SHARES

This Company is under the same management which has made  
*La Zacualpa Rubber Plantation* an acknowledged success.

FOR PARTICULARS AND PRINTED MATTER ADDRESS

**HIDALGO PLANTATION AND COMMERCIAL COMPANY**

713 MARKET STREET, SAN FRANCISCO, CALIFORNIA

*Mention The India Rubber World when you write.*

## THE MEXICAN MUTUAL PLANTERS COMPANY

Invites attention to the following facts relating to the  
planting on its plantation "La Junta," of 5554 acres,  
in the Trinidad Valley, Isthmus of Tehuantepec.

RUBBER.		COFFEE.		CACAO.	
	Acres.		Acres.		Acres.
4 years old, - - - -	455.26	4 years old, - - - -	29.64	5 years old, - - - -	7.5
3 years - - - - -	390.99	1 year - - - - -	285.77	2 years - - - - -	36.
2 years - - - - -	380.49		315.41	1 year - - - - -	83.29
1 year - - - - -	551.58	Contracted, 1905,	142.		126.79
	2078.32		457.41	Contracted, 1905,	100.
Contracted, 1905,	741.				226.79
	2819.32	Approximately 450,000 trees.		Approximately 40,000 trees.	
Approximately 2,000,000 Trees.		Cleared and planted to tame grasses for cattle and horses, 1190 Acres.			

WE began our planting in 1900 and complete it in 1905, making, we believe, the largest planting of cultivated rubber in the world.

We have not paid dividends—the trees must grow first.

We expect to pay a dividend in 1907. From that time we believe they will increase rapidly and afford returns that will amply justify and reward the faith and patience of our investors.

**DIVIDENDS WILL BE PAID ONLY WHEN EARNED.**

We have a few of our plantation bonds for sale, and will be pleased to furnish full information to those interested.

Address: **MEXICAN MUTUAL PLANTERS COMPANY,**  
910 Journal Building, CHICAGO, ILLINOIS.

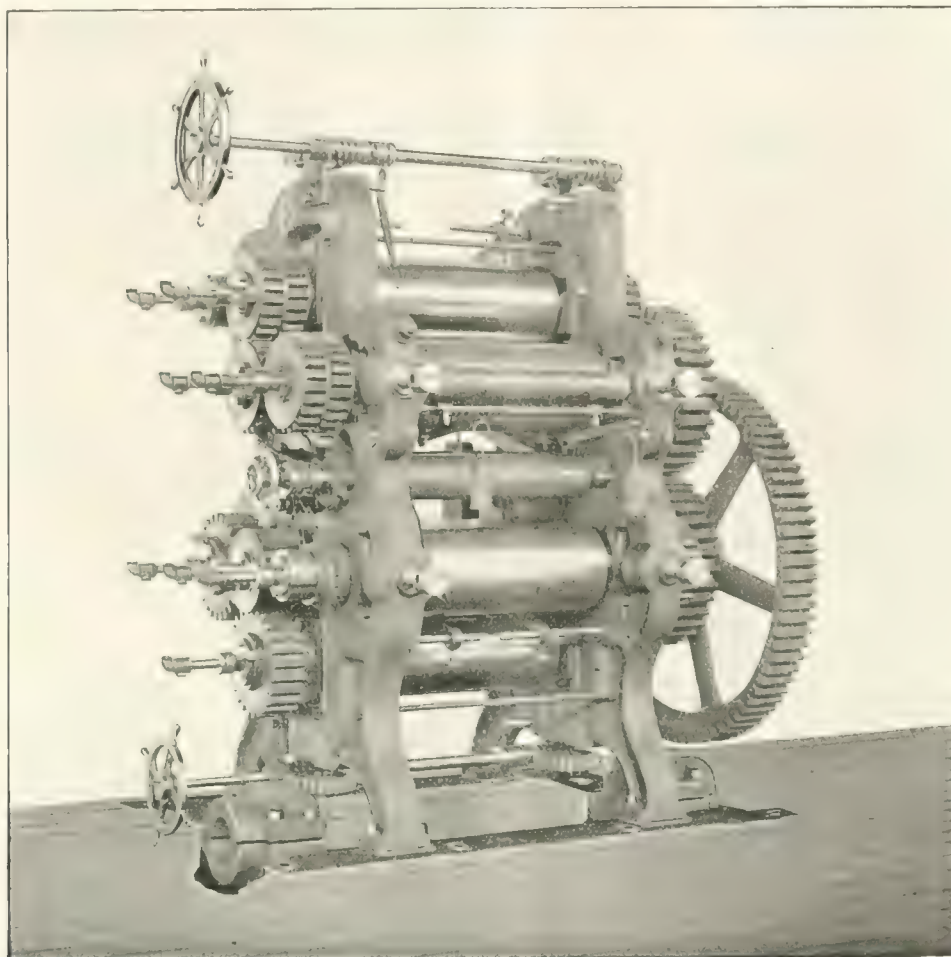
ESTABLISHED 1836.

INCORPORATED 1850.

# BIRMINGHAM IRON FOUNDRY,

DERBY, CONN., U. S. A.

Oldest and Largest Makers of RUBBER MILL MACHINERY in the United States.



PEARCE PATENT EIGHT ROLL DOUBLE SHEET CALENDER.

## RUBBER MILL MACHINERY.

**MILLS** Two and Three Roll Washers—Grinders, Warmers and Mixers, all sizes up to 26"x84"—Sheeters and Refiners—Crackers with Chilled Cut Rolls—Experimental mill for laboratory use, etc., etc.

**CALENDERS** Two, Three and Four Roll Calenders—Pearce Patent Six Roll Double Friction Calender—Soling and Upper Calenders with Engraved Rolls—Embossing Calenders for Carriage Cloth—Double Sheet Calenders—Special Calenders of all kinds.

**PRESSES** Hydraulic Presses for Belting—Clark's Patent Hydraulic Belt Stretchers—Screw Presses of all kinds—Multiple Hydraulic Presses for Mould Work—Accumulators and Pumps.

**POWER TRANSMISSION** Shafting; Pattern, Machine Moulded and Cut Gearing; Self-Oiling and Standard Pillow Blocks; Friction Clutches, etc.

**SPECIAL MACHINERY** Complete Rubber Reclaiming Plants—Belt Making Machines—Bias Cutting Machines—Automatic Jar Ring Lathes—Roller Bearing Heater Cars—Transfer Cars—Turn Tables—Cloth Dryers—Duck Slitters—Cording Machines—Band Cutting Machines—Spreaders—Varnishing Machines—Doubling Drums—Complete Hose Making Plants, etc.

Mention The India Rubber World when you write.



BOSTON.

CHICAGO.

PHILADELPHIA.

**J. H. LANE & CO.,**

110 WORTH ST., NEW YORK.

HOSE  
BELT  
SAIL  
WIDE**DUCKS**PAPER FELTS  
OUNCE GOODS  
ARMY DUCK  
OSNABURGS**AUTOMOBILE  
AND BICYCLE****TIRE FABRICS****SHEETINGS AND DRILLS.****SEA ISLAND, EGYPTIAN, AND PEELER YARNS,****AND FABRICS IN REGULAR AND SPECIAL CONSTRUCTION.***Mention The India Rubber World when you write.***Vacuum Drying  
Apparatus**

FOR

**Sheet and Reclaimed Rubber****EMIL PASSBURG SYSTEM**The Passburg (Patent) "VACUUM DRYING  
APPARATUS" is no experiment.They are installed in all of the principal rubber  
manufactories of Europe.200 chambers in daily operation drying rubber  
and rubber compounds.

Particulars upon application.

**JOSEPH P. DEVINE,**

314 Mooney-Brisbane Bldg.

**BUFFALO, N. Y.**

SOLE MANUFACTURING RIGHTS FOR AMERICA

**Handwork is costly  
and inaccurate.****Anything that the hands can do  
can be done by Machinery.****No Problem is too Difficult for us.****Do you want a Machine for any  
Purpose in Rubber Work?****Write to us and we will Produce it****WELLMAN SOLE CUTTING MACHINE CO.,  
MEDFORD, MASSACHUSETTS.**

A. M. STICKNEY, President.

EDWARD BROOKS, Treasurer.

*Mention The India Rubber World when you write.***L. J. WING MANUFACTURING CO.**

136 LIBERTY ST., NEW YORK.

Manufacturers of

Wing's Disc Fans, Exhausters, Blowers,

Heaters, Electric Motors, High Speed

Engines, Marine and Stationary

Gas Engines, Acetylene

Generators, etc.

SEND FOR CATALOGUES AND REFERENCE LIST.

*Mention The India Rubber World when you write.***THE MASON****Reducing Valves****ARE THE WORLD'S STANDARD VALVES.**For automatically reducing and absolutely  
maintaining an even steam or air pressure.*They are adapted for every need and guaranteed  
to work perfectly in every instance.*WRITE FOR FULL INFORMATION AND  
AGENCY REFERENCES.**THE MASON REGULATOR CO. Boston,  
Mass., U.S.A.**

# Publishers' Page

OFFICES:

No. 150 NASSAU ST., NEW YORK

## When To Send In Advertising "Copy."

OUR advertisers would confer a great favor upon the Publisher if, in sending in "copy" for changes, they would endeavor to do so as long as possible in advance of the date of publication—which is the last day of the month. We do not desire to fix any arbitrary rule as to the latest date in the month on which advertising copy will be received, for reasons may develop, just before the printing of the paper, to make a change of advertisement desirable. At the same time it will add to the convenience of the business office if those who intend sending in advertising "copy" will consider, not the latest date on which it can be handled, but the earliest date on which it can be furnished. Time should be allowed for sending proofs to the advertiser.

## "The Best and Most Reliable."

TO THE INDIA RUBBER WORLD—*Gentlemen*: We appreciate your interest in the success of *Castilloa* planting in Mexico, and read with great interest everything that appears in your paper concerning this industry. The information we get from it we regard as the best and most reliable that comes to us. We further appreciate the encouragement and indorsement you give to all honest and legitimate efforts to promote the rubber growing industry. Very sincerely yours,

———— Plantation Co.

San Francisco, California.

## From a Young Man in a Rubber Factory.

TO THE EDITOR OF THE INDIA RUBBER WORLD: Your favor has been received, and I thank you for the formula for making rubber adhere to iron. The same evening, on looking over your book, "Crude Rubber and Compounding Ingredients," I came across the same formula and several others, which might have saved my troubling you with my inquiry. I have had the book but a short time, but find it of the greatest value to me, as I am studying the manufacture of rubber in all its branches.

## Our Paper Helpful to a Jobber.

TO THE INDIA RUBBER WORLD—*Gentlemen*: We acknowledge your favor of the 11th, in relation to our inquiry for the name and address of the maker of ———. We appreciate your help in locating for us the makers of rubber specialties. We find THE INDIA RUBBER WORLD a great help to us when difficult matters present themselves. We are often obliged to write you regarding rubber specialties. Your paper renders us great service. It is an established rule with this house to follow up inquiries for rubber specialties and we very seldom fail in getting our information from THE INDIA RUBBER WORLD. It means much to us.

## A Good Word from France.

TO THE INDIA RUBBER WORLD—*Gentlemen*: We have been readers of your paper for many years, and we wish to say that it is the most valuable journal we know, relating to rubber. We are pleased to recommend it strongly to our friends, when traveling or meeting rubber people.

Paris.

## A Subscriber Who Wants Every Number.

THE manager of the English and American Rubber Co., Lille, France, in renewing his subscription to THE INDIA RUBBER WORLD, writes:

"I hope this money will reach you safely, as I would not miss one number of your valuable paper."

## Information On Rubber Planting.

A RECENT visitor to the offices of this Journal, interested in rubber planting, was attracted by a set of bound volumes of THE INDIA RUBBER WORLD. On looking through some of them, and seeing the number

of articles in relation to rubber culture, and noting their character, he at once purchased those for the past two years, as likely to be of great help to him. In answer to frequent inquiries for printed matter on rubber planting, we are obliged to say that we know of no other books containing so much information on the subject as these same bound volumes.

## "The India Rubber World" for Home Reading.

A LETTER to THE INDIA RUBBER WORLD from an important rubber factory in Germany says:

"We are subscribers to your estimable journal, but wish to subscribe for a second copy, to be sent to the private address of our Director" [after which follows the address.] "Please let us know how much the subscription, including postage, amounts to."

## Advertisements as News.

The elements of strength which have made the *New York Herald* so successful as a newspaper are discussed at length by John C. Freund in the *Journalist*, a professional paper in New York. After discussing other features of the *Herald*, he writes:

"But it is through its very advertisements that the *HERALD* possesses a force that none of its competitors approach. Here is a feature of a newspaper which I have rarely seen touched upon. When any paper, daily or weekly, general or trade paper, gets to a point where all the houses of any standing in a certain line place their announcements in its columns, these announcements in themselves, from their very completeness, become an important news feature."

The idea is that the *Herald's* advertising columns alone are a daily newspaper of what is going on in certain branches of trade in New York and its vicinity in which practically every firm advertises in that paper. The more firms in any branch there are represented in the advertising columns, the more people will be disposed to look into the paper for advertisements in that branch, and the greater will be the benefits to advertisers. Advertisements will be sure to be read if they say anything that readers care to know.

## Likes it at First Sight.

THE INDIA RUBBER WORLD invited a contribution from a foreign writer, not hitherto on our list, at the same time sending a copy of the paper as a specimen. In consenting to write as requested, the gentleman wrote:

"Thank you for the copy of your paper; first time I ever saw it. In place of the compensation you suggest, please put me on your subscription list and send a stack of back numbers. Never saw it before, and I like it thoroughly."

## The Tropical Agriculturist.

PUBLISHED MONTHLY BY

A. M. & J. FERGUSON, COLOMBO, CEYLON.

ALL about Tea, Coffee, Cacao, Figs, Citrus, etc., Cotton, Cane, Sugar, Liberian Coffee, India-rubber, Cinnamon, Cassia, Cocoanuts, Palmira and other Palm Trees, Aloes and other Fibre Plants, Rice, Fruit Trees, Vegetables, Citronella and other Grasses yielding Essential Oils, Gum, and other Tropical Products.

Rates of Subscription for America, including Postage.

YEARLY, \$5 50. IN ADVANCE, \$5 00.

HALF YEARLY, \$3 00. \$2 60.

The whole sixteen volumes published can be had for \$38.

## The Ceylon Observer

CIRCULATES throughout the island of Ceylon, and in Southern India. Its Overland Edition circulates extensively in Great Britain and Ireland. Annual subscription, \$15.00. Special rates for Clubs, \$8.00. The Advertising Rates are moderate. Special quotations given for Trade Announcements, appearing for a series of months.

Maps of Ceylon and India, Ceylon Directory, Planting Manuals, etc. Cheques should be drawn in favor of the MANAGER, *Ceylon Observer*.

Mention *The India Rubber World* when you write.



# Small Advertisement Department.

## SITUATIONS OPEN.

**SALESMAN** wanted by a large manufacturer of Druggists' Sundries. Complete line of Water Bottles and Fountain Syringes. Give age, experience, references and salary wanted. Address I. O. V., care of THE INDIA RUBBER WORLD. [808]

**SALESMAN** wanted by large Rubber Manufacturer. One who can sell solid and pneumatic Tires. Druggists' Sundries and Mechanical Goods. State age, experience, references and salary wanted. Address A. R. O., care of THE INDIA RUBBER WORLD. [809]

**WANTED.**—A Calender Man wanted capable of running all kinds of Tire stocks and Mechanical goods. Good position for the right man. State wages expected, and full details as to experience, qualification, etc. Also a good Mill Man wanted. Address C. A. N., care of THE INDIA RUBBER WORLD. [789]

**WANTED.**—A man of wide practical experience, to act as Superintendent by a Mechanical Rubber company, near New York. Must be up to date in construction of goods, and their economical production; forceful and aggressive, and able to produce results; one who is able to make up his own compounds and meet competition on high grade goods. Principals in company are practical and able to judge proper ability, and consequently none but the practical need apply. Address SUPERINTENDENT, care of THE INDIA RUBBER WORLD. [810]

**WANTED.**—Competent man to take charge of our Cotton Hose Weaving Department. Must be thoroughly familiar with repairing and running circular looms, twisting and handling yarns, etc. State experience. Address DE LASKI LOOM, care of THE INDIA RUBBER WORLD. [810]

**WANTED** by a large manufacturer, man capable of suggesting, and who knows how to manufacture, new lines of Rubber Goods which can be sold by a force of traveling salesmen, in addition to lines they now carry. Address M. F. R., care of THE INDIA RUBBER WORLD. [807]

**WANTED.**—A thoroughly competent man with practical experience in the details of manufacturing Automobile Tires, and capable of assuming foremanship of department. Address FOREMAN, care of THE INDIA RUBBER WORLD. [821]

**WANTED.**—A capable Foreman for Air Brake Hose Department. One familiar with the manufacture of high grade specification goods. Address A. C. F., care of THE INDIA RUBBER WORLD. [822]

## SITUATIONS WANTED.

**ASSISTANT SUPERINTENDENT.**—Wanted by a young man, a position as Assistant Superintendent or Manager in a Rubber Factory. Have had thorough experience in the manufacture of Clothing, Druggists' Sundries, Mold Work and Coated Cloths, and have all formulas for same. Have good executive ability. Address A. B., care of THE INDIA RUBBER WORLD. [806]

**A MAN 34**, with good record in Mechanical Goods and Tires as Superintendent and Sales Manager would like situation in office or factory, or traveling; 13 years' experience; highest references. Address PRACTICAL, care of THE INDIA RUBBER WORLD. [815]

**MANAGER.**—Position wanted as Manager of Cost Department or as Cost Clerk, by man 35 years of age. Have had five years' experience and can furnish the best of references. Address A1, care of THE INDIA RUBBER WORLD. [805]

**MECHANICAL ENGINEER** is open for a position with a good reliable rubber company or any one who is contemplating building a new factory. Have had experience in designing all classes of Machinery for all classes of Rubber Goods manufactured. Address M. E., care of THE INDIA RUBBER WORLD. [820]

**POSITION** wanted by a thoroughly practical man on Tires and Mechanical Goods. Prefer corresponding with a company that would take up a new Auto Tire and where ability would be appreciated. Address AUTO, care of THE INDIA RUBBER WORLD. [817]

**PRACTICAL SUPERINTENDENT.**—Position wanted as Superintendent with reliable firm in the Mechanical line, where honest effort and a disposition to hustle and attain best results will be appreciated; 20 years' experience in all branches. Address EXECUTIVE, care of THE INDIA RUBBER WORLD. [794]

## SITUATIONS WANTED.

**SUPERINTENDENT** who has had nearly 20 years' experience in the Mechanical and Reclaiming business will act as Consulting Superintendent. If you want recipes of any kind, or want to match other makes of goods, want to reduce the cost of the goods you are now making, or are having trouble with any of your stocks, write me confidentially. Address B. C. O., care of THE INDIA RUBBER WORLD. [749]

**SUPERINTENDENT.**—Position wanted as Superintendent of factory making Mechanical Rubber Goods by a young man who has had wide experience in that capacity both in the United States and Europe. Address EXPERIENCE, care of THE INDIA RUBBER WORLD. [823]

## FOR SALE.

**FOR SALE.**—Factory Rubber Waste from Rubber Cement; cleaned at a low price; sample sent free. UNITED STATES WASTE RUBBER CO., No. 487 North Warren Avenue, Brockton, Mass.

**GRINDERS.** Two 15 × 36 chilled roll Birmingham Mills; two 14 × 40 chilled roll Birmingham Mills; one 5 × 11 Vulcanizer or Devulcanizer, hinged door and bolts, tested 150. W. C. COLEMAN CO., Rochelle Park, New Jersey.

**FOR SALE.**—First-class Cement Churns or Mixers at half value. Address JOSEPH WHITNEY, 48 North Front St., Philadelphia, Pa. [680]

**FOR SALE.**—One 22 × 54 three roll Farrel Calender, good as new, used but one year on stamp gum; one 18 × 46 three roll Calender, excellent for friction; also several Vulcanizers, Tubing Machines, Wrapping Machines, etc. Interested parties will kindly address CALENDER, care of THE INDIA RUBBER WORLD. [811]

## WANTED.

**WANTED.**—A second hand No. 2 Tubing Machine in good condition, either Royle or Coleman. Please address, giving price and description of machine, D., care of THE INDIA RUBBER WORLD. [818]

## FACTORY WANTED.

**WANTED** a rubber factory suited for making Molded Goods, Jar Rings, Tape, etc. Address J. R. T., care of THE INDIA RUBBER WORLD. [812]

## BUSINESS OPPORTUNITY.

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**WANTED.**—Man with knowledge of Mechanical Rubber business, with \$45,000, to buy interest of retiring officer in large plant making money. Address EXPERIENCE, care of THE INDIA RUBBER WORLD. [819]

**WELL** known Liverpool and reputable firm of India-rubber Merchants and Importers are open to buy on commission for good American and otherwise act as required, etc. Address LIVERPOOL, care of THE INDIA RUBBER WORLD. [813]

## TAX ON SALESMEN IN CANADA.

**THE** Government of the Province of Quebec, Canada, has passed a law taxing foreign traveling salesmen \$300 each per year. An American residing in Quebec and thoroughly posted in Rubber Goods, particularly Mechanical Goods and Sundries, will represent American houses. Address REPRESENTATIVE, care of THE INDIA RUBBER WORLD. [814]

**HERBERT S. KIMBALL,**  
**MILL ARCHITECT and ENGINEER,**  
**RUBBER FACTORY ENGINEERING.**  
101 TREMONT STREET, BOSTON, MASS.

## THE ZAPOTE TREE AND CHICLE GUM.

BY A. J. LISPINASSI \*

**A**MONG the numerous natural products abounding in this fertile region [The Mexican canton of Tuxpam] the Zapote tree stands preëminent, its gum and wood during many decades having formed a source of wealth to a large number of individuals and corporations, native and foreign, which have obtained from the state government proprietary rights or concessions to extract Chicle gum.

The wood of the Zapote tree† is dark purplish red, and although exceedingly hard when first cut it is easily worked until thoroughly seasoned, when only the finest edged tools have any effect on its flint like surface. Sharp pointed nails can be driven into the wood only about an inch. The fiber is so dense that the wood sinks rapidly in water, and will remain immersed for years without being affected in the least. Zapote door frames in the ruins of Uxmal are as perfect to day as when first placed in position. The wood is susceptible of a beautiful polish. The average Zapote will square 5 to 8 inches and occasionally 2 feet. It is claimed that the bark is employed to great advantage in tanning processes, and that leather so treated is superior to other kinds.

The magnificent trees are rapidly disappearing, as the operators are taking no precautions to protect them from the destructive methods of the *chicleros*, who, in their greed to obtain all the sap possible, cut the trees so deep that they do not recover from the effects of the incisions, but gradually decay. Before the trees reach this stage, and while still easy to work, they are cut down and shaped into building material.

The Chicle industry extends from this section as far as the extreme southern portion of Yucatan, which produces the largest yield, but in quality the gum is inferior to that obtained from this section, especially in the Tuxpam district. The latter gum commands a higher price in the United States, to which it is almost exclusively shipped.

Zapote trees thrive best on high, rolling land, and although

\* United States consul at Tuxpam, Mexico; extract from a forthcoming official report.

† *Akraya zapota*, of the natural order *Sapotaceæ*. The same natural order embraces the genus *Isonandra*, which yields Gutta-percha, and the genus *Mimusops*, the source of Balata. [See an article on "The Basis of The Chewing Gum Trade," in THE INDIA RUBBER WORLD, November 10, 1897, page 13.]



THE interest is desired of an Up-to-date Rubber Factory prepared to engage on an important scale in the production of a new but thoroughly tested Flooring Material composed of Rubber and a Wear

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trees are found on the lowlands, they are inferior in both sap and wood. Continuous tapping does not appear to have a seriously detrimental effect, provided the incisions are not too deep. Trees are known to have been tapped for 25 years, but after that time produced only from ½ pound to 2 pounds of sap. If allowed to rest five or six years they will produce from 3 to 5 pounds. The average height of the trees is about 30 feet. Zapotes are exceedingly slow in growth, and require from 40 to 50 years to attain full height.

The Chicle season opens early in September, though the yield at this period is limited, and, owing to still copious rains, the *chicleros* (laborers) are retarded in their work; but this is to a great extent a benefit, as rains are favorable to an abundant flow of the sap, provided the rainy season is not prolonged beyond October, in which case sap would contain a larger proportion of water, and the loss in condensation would be heavy and the product inferior. New trees will produce from 15 to 25 pounds of sap, according to size. In order to produce 25 pounds a tree would have to square about 2 feet and be from 25 to 30 feet high.

The process of extracting the sap is extremely primitive. Open V shaped incisions are made in the tree trunks, permitting the sap to flow in a continuous stream. At the foot of each tree a palm or other appropriate leaf is fastened, which acts as a leader or gutter from which the Chicle drips into the receptacle placed to receive it.

Prices in this market range from \$8 to \$15 Mexican currency [\$3.82 to \$7.16] per 25 pounds; last season the average was about \$14 [\$6.38] per 25 pounds.

## Bound Yearly Volumes of The India Rubber World For Sale at This Office PRICE \$5 EACH, PREPAID.

### RUBBER MILL MACHINERY FOR SALE. PRACTICALLY NEW.

THREE Stock and Friction Calenders, size of rolls 18" x 48"; condition as good as new. They can be seen standing and working.==Two Friction Calenders, 20" x 48" and 20" x 36", practically new; can be seen working.==Fifteen Mills, in the best of condition, as good as new, size of rolls 15" x 36",==Five Crackers and Washers, of different sizes.==Four Mills, 12" x 36",==One Devulcanizer for reclaiming.==Three large cars, stand 125 pounds steam pressure; size of Devulcanizer, 6 feet diameter by 25 feet long.==Three large "Buffalo Forge Company" Fans that have been in use six months. Size of one Fan 10 feet diameter by 5 feet; chain gear drive with chain belt. The other two Fans are 5 feet diameter by 3 feet with upright engine drive. Those Fans are new.==One Hydraulic Press 30" x 30" platens, five openings, 9" ram, practically new.==A large lot of all sizes of Pumps.==Two Upper and Soling Calenders, size of main rolls, 12" x 30"; two shifting front rolls, 10" x 30", practically new. One Soling Calendar, four rolls set upright, size of rolls 10" x 22".==Three Up-to-date Burrstone Mills, iron frames on stands, complete with shafting and pulley, size of stone, 3½ feet in diameter.==One Centrifugal Woll Washer.==New bedplate, frames, clutch and boxes of a 60 Mill.==Three 20" x 22", one opening, Heel Presses.==One new 27 HP. Ball Engine. One large Wright Engine as good as new and ready to work. Size of cylinder 24" x 48". One 6 HP. Harris Corliss Engine which can be seen setting up at the factory of the National India Rubber Co., Bristol, R. I. It has never been connected.==A large lot of all kinds of Rubber Mill Machinery.==Just bought about 500 tons of other rubber mill machinery that is not listed here. All of this machinery I want to dispose of quickly for cash. PHILIP MC GRORY, Trenton, New Jersey.

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*tica*, and other Rubber seeds and plants available several times in the year.

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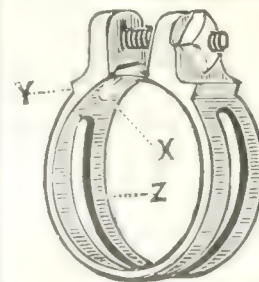
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 PRICE \$5 EACH, PREPAID.

# Notice to the Trade.

IN CHANCERY OF NEW JERSEY

Between

EUREKA FIRE HOSE COMPANY

Complainant,

and

THE EUREKA RUBBER MANUFACTURING COMPANY

Defendant.

ON BILL, ETC.

FINAL DECREE.

This cause coming on to be heard on pleadings and proofs in the presence of Randolph Perkins, Gilbert Collins and Richard V. Lindabury, of counsel for complainant, and John V. B. Wicoff and William M. Lanning, of counsel for the defendant; and the court having heard and considered the evidence and the argument of counsel and having taken time for consideration and being of opinion that the complainant has as against the defendant an exclusive right to the use of the word or name "Eureka" as applied to conductive hose, and that the use of this name or word by defendant in the marketing by defendant of conductive hose is an infringement of said complainant's right to the exclusive use of the said word or name "Eureka" in that connection; and that the use of the word or name "Eureka" by the defendant in its corporate title or otherwise in connection with the marketing of conductive hose in competition with the complainant was and is unfair and fraudulent competition.

IT IS THEREUPON, on this sixth day of June in the year of our Lord, One thousand nine hundred and five, by his Honor William J. Magie, Chancellor of the State of New Jersey, ordered, adjudged and decreed and the said Chancellor does by virtue of the power and authority of this Court, hereby order, adjudge and decree that the said defendant, its officers, directors, agents and attorneys, be and they are hereby perpetually enjoined and restrained from directly or indirectly using the word "Eureka" as part of the corporate title of the defendant, or in any form or combination, or in any connection with the advertisement or sale of conductive hose; and also from using the word "Eureka" in the corporate title of the defendant or otherwise, so long as the defendant manufactures or sells, or continues to manufacture or sell conductive hose.

It is further ordered that a perpetual injunction do issue accordingly.

And it is further ordered, that the application of the complainant for a general decree enjoining altogether the use by the defendant of its corporate title be denied, but without prejudice to the filing of a bill hereafter to enjoin such use in case it should appear that under the application of the limited injunction hereby granted confusing or uncertainty to the injury of the complainant exists or continues.

And it is further ordered that the application of the complainant for an injunction restraining the use by the defendant of the red, white and blue tri-color device described in said complainant's bill of complaint on the goods manufactured by the defendant and on its letter heads, envelopes and catalogues be denied.

And it is further ordered that either party have leave to apply to this Court, at the foot of this decree for further directions, if it should appear to be necessary in order to effectuate this decree, or to protect the rights of either party thereunder.

And it is further ordered, adjudged and decreed that the said complainant recover against the said defendant, its cost of this suit to be taxed and that execution do issue according to the practice of this Court.

[Signed] W. J. MAGIE.

Respectfully advised.

JOHN R. EMERY,

Vice Chancellor.

[A TRUE COPY].

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Cleveland Rubber Co., Cleveland, O.  
B. F. Goodrich Co., Akron, O.  
Empire Rubber Mfg. Co., Trenton, N. J.  
Eureka Rubber Mfg. Co. of Trenton.  
Manhattan Rubber Mfg. Co., New York.  
Republic Rubber Co., Youngstown, Ohio.  
New York Belting & Packing Co., N. Y.

### Fuller Balls.

B. F. Goodrich Co., Akron, O.  
N. J. Car Spring & Rubber Co., Jersey City.



## RUBBER BUYERS' DIRECTORY—CONTINUED.

## MECHANICAL GOODS.

## Fuller Balls—Continued.

Peerless Rubber Mfg. Co., New York.  
Republic Rubber Co., Youngstown, O.

## Gage Glass Washers.

Boston Belting Co., Boston, Mass.  
Canadian Rubber Co., Montreal.  
Cleveland Rubber Co., Cleveland, O.  
Empire Rubber Mfg. Co., Trenton, N. J.  
Home Rubber Co., Trenton, N. J.  
Liverpool Rubber Co., Liverpool, Eng.  
Manhattan Rubber Mfg. Co., New York.  
Mechanical Rubber Co., Chicago, Ill.  
N. J. Car Spring & Rubber Co., Jersey City, N. J.  
New York Belting & Packing Co., N. Y.  
New York Rubber Co., New York.  
Revere Rubber Co., Boston, Mass.  
Jos. Stokes Rubber Co., Trenton, N. J.  
Voorhees Rubber Mfg. Co., Jersey City, N. J.

## Gas-Bags (Rubber).

Canadian Rubber Co., Montreal.  
Cleveland Rubber Co., Cleveland, O.  
Daval Rubber Co., Providence, R. I.  
B. F. Goodrich Co., Akron, O.  
Liverpool Rubber Co., Liverpool, Eng.  
N. J. Car Spring & Rubber Co., Jersey City, N. J.  
Peerless Rubber Mfg. Co., New York.  
Tyer Rubber Co., Andover, Mass.  
Voorhees Rubber Mfg. Co., Jersey City.

## Gasket Tubing.

Canadian Rubber Co., Montreal.  
Jenkins Bros., New York.

## Hat Bags.

Boston Belting Co., Boston.  
Canadian Rubber Co., Montreal.  
Home Rubber Co., Trenton, N. J.  
Manhattan Rubber Mfg. Co., New York.  
Mechanical Rubber Co., Chicago.  
N. J. Car Spring & Rubber Co., Jersey City, N. J.  
New York Belting & Packing Co., N. Y.  
New York Rubber Co., New York.  
Peerless Rubber Mfg. Co., New York.  
Republic Rubber Co., Youngstown, O.  
Revere Rubber Co., Boston.

## Horse Shoe Pads.

Canadian Rubber Co., Montreal.  
Home Rubber Co., Trenton, N. J.  
Peerless Rubber Mfg. Co., New York.  
Plymouth Rubber Co., Stoughton, Mass.  
Revere Rubber Co., Boston-New York.  
Voorhees Rubber Mfg. Co., Jersey City.

## Hose—Armored.

## Hose—Wire Wound.

Boston Belting Co., Boston-New York.  
Boston Woven Hose & Rubber Co.  
Canadian Rubber Co., Montreal.  
B. F. Goodrich Co., Akron, O.  
N. J. Car Spring & Rubber Co., Jersey City.  
Peerless Rubber Mfg. Co., New York.  
Republic Rubber Co., Youngstown, O.  
Revere Rubber Co., Boston-New York.  
Voorhees Rubber Mfg. Co., Jersey City.

## Hose Couplings and Fittings.

Boston Woven Hose & Rubber Co.  
Canadian Rubber Co., Montreal.

## Hose Linings.

Boston Belting Co., Boston-New York.  
Boston Woven Hose & Rubber Co.  
Empire Rubber Mfg. Co., Trenton, N. J.  
Eureka Rubber Mfg. Co., Trenton, N. J.  
N. J. Car Spring & Rubber Co., Jersey City, N. J.  
Peerless Rubber Mfg. Co., New York.

## Hose—Protected.

Boston Belting Co., Boston-New York.  
Revere Rubber Co., Boston-New York.  
Voorhees Rubber Mfg. Co., Jersey City.

## Hose Racks and Reels.

Wirt & Knox Mfg. Co., Philadelphia.

## Hose Rubber Lined.

Boston Belting Co., Boston-New York.  
Boston Woven Hose & Rubber Co.

## MECHANICAL GOODS.

## Hose Rubber Lined—Continued.

## COTTON AND LINES

Canadian Rubber Co., Montreal.  
Cleveland Rubber Co., Cleveland, O.  
Empire Rubber Mfg. Co., Trenton, N. J.  
Eureka Fire Hose Co., New York.  
Eureka Rubber Mfg. Co., Trenton.  
B. F. Goodrich Co., Akron, O.  
Gutta Percha & Rubber Mfg. Co., N. Y.  
Gutta Percha and Rubber Mfg. Co. of Toronto.  
Home Rubber Co., Trenton, N. J.  
Manhattan Rubber Mfg. Co., New York.  
N. J. Car Spring & Rubber Co., Jersey City, N. J.  
New York Belting & Packing Co., N. Y.  
Peerless Rubber Mfg. Co., New York.  
Republic Rubber Co., Youngstown, O.  
Revere Rubber Co., Boston.  
Jos. Stokes Rubber Co., Trenton, N. J.  
Voorhees Rubber Mfg. Co., Jersey City.

## Hose—Submarine.

Boston Belting Co., Boston-New York.  
B. F. Goodrich Co., Akron, O.  
Republic Rubber Co., Youngstown, O.

## "Jenkins '96" Packing.

Jenkins Bros., New York.

## Lawn Sprinklers.

Boston Woven Hose & Rubber Co.  
Canadian Rubber Co., Montreal.

## Mallets (Rubber).

Boston Belting Co., Boston-New York.  
B. F. Goodrich Co., Akron, O.  
Peerless Rubber Mfg. Co., New York.  
Revere Rubber Co., Boston-New York.

## Mould Work.

[See Mechanical Rubber Goods.]

Davidson Rubber Co., Boston.  
Daval Rubber Co., Providence, R. I.  
Faultless Rubber Co., Akron, O.  
Hardman Rubber Co., Belleville, N. J.  
Hodgman Rubber Co., New York.  
La Crosse (Wis.) Rubber Mills Co.  
Mattson Rubber Co., New York.  
Mitzel Rubber Co., Akron, O.  
National India Rubber Co., Bristol, R. I.  
Plymouth Rubber Co., Stoughton, Mass.  
Tyer Rubber Co., Andover, Mass.

## "Nubian" Packing.

Voorhees Rubber Mfg. Co., Jersey City.

## Oil Well Supplies.

Boston Belting Co., Boston-New York.  
Boston Woven Hose & Rubber Co.  
B. F. Goodrich Co., Akron, O.  
Home Rubber Co., Trenton, N. J.  
Lake Shore Rubber Co., Erie, Pa.  
N. J. Car Spring & Rubber Co., Jersey City.  
Peerless Rubber Mfg. Co., New York.  
Republic Rubber Co., Youngstown, O.  
Revere Rubber Co., Boston-Pittsburgh.  
Voorhees Rubber Mfg. Co., Jersey City.

## Paper Machine Rollers.

Boston Belting Co., Boston-New York.  
B. F. Goodrich Co., Akron, O.  
Republic Rubber Co., Youngstown, O.  
Revere Rubber Co., Boston-New York.  
Peerless Rubber Mfg. Co., New York.  
Voorhees Rubber Mfg. Co., Jersey City.

## "Perfection" Belting.

Boston Woven Hose & Rubber Co.

## Plumbers' Supplies.

Canadian Rubber Co., Montreal.  
B. F. Goodrich Co., Akron, O.  
Republic Rubber Co., Youngstown, O.

## Pump Valves.

Jenkins Bros., New York.

## "Rainbow" Packing.

Peerless Rubber Mfg. Co., New York.

## MECHANICAL GOODS.

## Rollers—Rubber Covered.

Boston Belting Co., Boston.  
Canadian Rubber Co., Montreal.  
Cleveland Rubber Co., Cleveland, O.  
Empire Rubber Mfg. Co., Trenton, N. J.  
Eureka Rubber Mfg. Co., Trenton.  
B. F. Goodrich Co., Akron, O.  
Home Rubber Co., Trenton, N. J.  
Manhattan Rubber Mfg. Co., New York.  
Mechanical Rubber Co., Chicago.  
N. J. Car Spring & Rubber Co., Jersey City, N. J.  
New York Belting & Packing Co., N. Y.  
Peerless Rubber Mfg. Co., New York.  
Plymouth Rubber Co., Stoughton, Mass.  
Republic Rubber Co., Youngstown, O.  
Revere Rubber Co., Boston-New York.

## Sewing Machine Rubbers.

B. F. Goodrich Co., Akron, O.

## Springs—Rubber.

Boston Belting Co., Boston-New York.  
Canadian Rubber Co., Montreal.  
B. F. Goodrich Co., Akron, O.  
Hardman Rubber Co., Belleville, N. J.  
Liverpool Rubber Co., Liverpool, Eng.  
N. J. Car Spring & Rubber Co., Jersey City.  
Peerless Rubber Mfg. Co., New York.  
Plymouth Rubber Co., Stoughton, Mass.  
Republic Rubber Co., Youngstown, Ohio.  
Revere Rubber Co., Boston-New York.  
Voorhees Rubber Mfg. Co., Jersey City.

## Stair Treads.

Boston Belting Co., Boston-New York.  
Boston Woven Hose & Rubber Co.  
Canadian Rubber Co., Montreal.  
Cleveland Rubber Co., Cleveland, O.  
Empire Rubber Mfg. Co., Trenton, N. J.  
Home Rubber Co., Trenton, N. J.  
Liverpool Rubber Co., Liverpool, Eng.  
Manhattan Rubber Mfg. Co., New York.  
N. J. Car Spring & Rubber Co., Jersey City, N. J.  
New York Belting & Packing Co., N. Y.  
New York Rubber Co., New York.  
Peerless Rubber Mfg. Co., New York.  
Republic Rubber Co., Youngstown, O.  
Revere Rubber Co., Boston-New York.  
Voorhees Rubber Mfg. Co., Jersey City.

## Thread.

Mechanical Fabric Co., Providence, R. I.  
Revere Rubber Co., Boston.

## Tiling.

Canadian Rubber Co., Montreal, Ltd.  
B. F. Goodrich Co., Akron, O.  
Gutta Percha & Rubber Mfg. Co., N. Y.  
N. J. Car Spring & Rubber Co., Jersey City.  
New York Belting & Packing Co., N. Y.  
Peerless Rubber Mfg. Co., New York.  
Republic Rubber Co., Youngstown, Ohio.  
Voorhees Rubber Mfg. Co., Jersey City.

## Tires.

Automobile, Bicycle, and Carriage.

Canadian Rubber Co., Montreal, Ltd.  
Continental Caoutchouc & Gutta-percha Co., Hanover.  
Empire Rubber Mfg. Co., Trenton, N. J.  
B. F. Goodrich Co., Akron, O.  
Gutta Percha & Rubber Mfg. Co., Toronto.  
Kokomo Rubber Co., Kokomo, Ind.  
Lake Shore Rubber Co., Erie, Pa.  
Liverpool Rubber Co., Liverpool, Eng.  
North British Rubber Co., Ltd., Edinburgh.  
Plymouth Rubber Co., Stoughton, Mass.  
Republic Rubber Co., Youngstown, O.

Automobile and Carriage.

Boston Belting Co., Boston-New York.  
Eureka Rubber Mfg. Co., Trenton, N. J.  
Michelin Tire American Agency, N. Y.  
Revere Rubber Co., Boston-New York.  
Springfield Tire & Rubber Co., Springfield, Ohio.

## Truck Bands.

Boston Belting Co., Boston.  
Cleveland Rubber Co., Cleveland, O.

## MECHANICAL GOODS.

## Truck Bands—Continued.

Empire Rubber Mfg. Co., Trenton, N. J.  
B. F. Goodrich Co., Akron, O.  
Home Rubber Co., Trenton, N. J.  
Manhattan Rubber Mfg. Co., New York.  
Mechanical Rubber Co., Chicago.  
N. J. Car Spring & Rubber Co., Jersey City, N. J.  
New York Belting & Packing Co., N. Y.  
Peerless Rubber Mfg. Co., New York.  
Republic Rubber Co., Youngstown, O.  
Voorhees Rubber Mfg. Co., Jersey City.

## Tubing.

[See Mechanical Rubber Goods.]

American Hard Rubber Co., New York.  
Davidson Rubber Co., Boston.  
Daval Rubber Co., Providence, R. I.  
Hardman Rubber Co., Belleville, N. J.  
Plymouth Rubber Co., Stoughton, Mass.  
Tyer Rubber Co., Andover, Mass.

## "Usudurian" Packing.

Revere Rubber Co., Boston-New York.

## Valve Balls.

Boston Belting Co., Boston.  
Cleveland Rubber Co., Cleveland, O.  
Manhattan Rubber Mfg. Co., New York.  
Mechanical Rubber Co., Chicago.  
New York Belting & Packing Co., N. Y.  
New York Rubber Co., New York.  
Peerless Rubber Mfg. Co., New York.  
Republic Rubber Co., Youngstown, O.

## Valve Discs.

American Hard Rubber Co., New York.  
Boston Belting Co., Boston-New York.  
B. F. Goodrich Co., Akron, O.  
Peerless Rubber Mfg. Co., New York.  
Republic Rubber Co., Youngstown, O.  
Revere Rubber Co., Boston-New York.

## Valves.

[See Mechanical Rubber Goods.]

Jenkins Bros., New York-Chicago.  
Plymouth Rubber Co., Stoughton, Mass.

## Wringer Rolls.

Canadian Rubber Co., Montreal.  
Cleveland Rubber Co., Cleveland, O.  
B. F. Goodrich Co., Akron, O.  
Home Rubber Co., Trenton, N. J.  
Republic Rubber Co., Youngstown, O.

## DRUGGISTS' AND STATIONERS' SUNDRIES

## Atomizers.

## Bandages.

## Bulbs.

## Syringes.

## Water Bottles.

## Druggists' Sundries—General.

American Hard Rubber Co., New York.  
C. J. Bailey & Co., Boston.  
Boston Woven Hose & Rubber Co.  
Canadian Rubber Co., Montreal.  
Cleveland Rubber Co., Cleveland, O.  
Davidson Rubber Co., Boston.  
Daval Rubber Co., Providence, R. I.  
Faultless Rubber Co., Akron, O.  
B. F. Goodrich Co., Akron, O.  
Hardman Rubber Co., Belleville, N. J.  
Hodgman Rubber Co., New York.  
Mitzel Rubber Co., Akron, O.  
North British Rubber Co., Ltd., Edinburgh.  
Tyer Rubber Co., Andover, Mass.

## Balls, Dolls and Toys.

Canadian Rubber Co., Montreal.  
Continental Caoutchouc & Gutta-percha Co.  
B. F. Goodrich Co., Akron, O.  
New York Rubber Co., New York.



## RUBBER BUYERS' DIRECTORY—CONTINUED.

## DRUGGISTS' SUNDRIES

## Combs.

American Hard Rubber Co., New York.

## Elastic Bands.

Canadian Rubber Co. of Montreal.  
Davidson Rubber Co., Boston.  
Daval Rubber Co., Providence, R. I.  
B. F. Goodrich Co., Akron, O.  
Hodgman Rubber Co., New York-Boston.  
Tyer Rubber Co., Andover, Mass.

## Erasive Rubbers.

Davidson Rubber Co., Boston.  
B. F. Goodrich Co., Akron, O.  
Hardman Rubber Co., Belleville, N. J.  
Mattson Rubber Co., New York.

## Finger Cots.

Faultless Rubber Mfg. Co., Akron, O.  
B. F. Goodrich Co., Akron, O.  
Pure Gum Specialty Co., Barberton, O.

## Gloves.

Canadian Rubber Co. of Montreal.  
Daval Rubber Co., Providence, R. I.  
Faultless Rubber Co., Akron, O.  
B. F. Goodrich Co., Akron, O.  
Pure Gum Specialty Co., Barberton, O.

## Hard Rubber Goods.

American Hard Rubber Co., New York.  
Canadian Rubber Co. of Montreal.  
Daval Rubber Co., Providence, R. I.  
Hardman Rubber Co., Belleville, N. J.  
Stokes Rubber Co., Joseph, Trenton, N. J.  
Tyer Rubber Co., Andover, Mass.

## Hospital Sheetings.

Cleveland Rubber Co., Cleveland, O.  
Davidson Rubber Co., Boston.  
Daval Rubber Co., Providence, R. I.  
Hodgman Rubber Co., New York.  
Plymouth Rubber Co., Stoughton, Mass.  
Tyer Rubber Co., Andover, Mass.

## Hot Water Bottles.

[See Water Bottles.]

## Ice Bags and Ice Caps.

Faultless Rubber Co., Akron, Ohio.  
B. F. Goodrich Co., Akron, O.  
Hardman Rubber Co., Belleville, N. J.  
Pure Gum Specialty Co., Barberton, O.  
Tyer Rubber Co., Andover, Mass.

## Life Preservers.

Hodgman Rubber Co., New York.

## Nipples.

Canadian Rubber Co. of Montreal.  
Cleveland Rubber Co., Cleveland, O.  
Davidson Rubber Co., Boston.  
Daval Rubber Co., Providence, R. I.  
Faultless Rubber Co., Akron, O.  
B. F. Goodrich Co., Akron, O.  
Pure Gum Specialty Co., Barberton, O.  
Tyer Rubber Co., Andover, Mass.

## Sponges (Rubber).

Faultless Rubber Co., Ashland, Ohio.  
B. F. Goodrich Co., Akron, O.

## Stationers' Sundries.

American Hard Rubber Co., New York.  
Boston Woven Hose & Rubber Co.  
Canadian Rubber Co. of Montreal.  
Cleveland Rubber Co., Cleveland, O.  
Davidson Rubber Co., Boston.  
Daval Rubber Co., Providence, R. I.  
B. F. Goodrich Co., Akron, O.  
Hardman Rubber Co., Belleville, N. J.  
Hodgman Rubber Co., New York-Boston.  
Tyer Rubber Co., Andover, Mass.

## Stopples (Rubber).

Cleveland Rubber Co., Cleveland, O.  
Daval Rubber Co., Providence, R. I.  
Hodgman Rubber Co., New York.  
Manhattan Rubber Mfg. Co., New York.  
New York Belting & Packing Co., N. Y.  
Tyer Rubber Co., Andover, Mass.

## DRUGGISTS' SUNDRIES.

## Throat Bags.

Cleveland Rubber Co., Cleveland, O.  
Daval Rubber Co., Providence, R. I.  
B. F. Goodrich Co., Akron, O.  
Tyer Rubber Co., Andover, Mass.

## Tobacco Pouches.

Canadian Rubber Co. of Montreal.  
Faultless Rubber Co., Akron, Ohio.  
B. F. Goodrich Co., Akron, O.  
Pure Gum Specialty Co., Barberton, O.  
Tyer Rubber Co., Andover, Mass.

MACKINTOSHED  
AND SURFACE  
GOODS

## Air Goods (Rubber).

Canadian Rubber Co. of Montreal.  
Cleveland Rubber Co., Cleveland, O.  
Daval Rubber Co., Providence, R. I.  
B. F. Goodrich Co., Akron, O.  
Hodgman Rubber Co., New York.  
New York Rubber Co., New York.  
National India Rubber Co., Providence.  
Tyer Rubber Co., Andover, Mass.

## Air Mattresses.

Canadian Rubber Co. of Montreal.  
Mechanical Fabric Co., Providence, R. I.

## Barbers' Bibs.

Daval Rubber Co., Providence, R. I.  
Tyer Rubber Co., Andover, Mass.

## Bathing Caps.

Daval Rubber Co., Providence, R. I.  
B. F. Goodrich Co., Akron, O.

## Bellows Cloths.

Boston Rubber Co., Boston.  
Cleveland Rubber Co., Cleveland, O.  
Hodgman Rubber Co., New York.  
La Crosse (Wis.) Rubber Mills Co.

## Calendering.

La Crosse (Wis.) Rubber Mills Co.  
Plymouth Rubber Co., Stoughton, Mass.

## Carriage Ducks and Drills.

Cleveland Rubber Co., Cleveland, O.  
Empire Rubber Mfg. Co., Trenton, N. J.  
Eureka Rubber Mfg. Co. of Trenton.  
Gutta Percha & Rubber Mfg. Co., Toronto.

## Clothing.

Canadian Rubber Co. of Montreal.  
Cleveland Rubber Co., Cleveland, O.  
Granby Rubber Co., Granby, Quebec.  
Gutta Percha & Rubber Mfg. Co. of Toronto.  
Hodgman Rubber Co., New York.  
La Crosse (Wis.) Rubber Mills Co.  
North British Rubber Co., Ltd., Edinburgh.

## Cravenette.

Cravenette Co., Ltd.

## Diving Dresses.

Hodgman Rubber Co., New York.

## Dress Shields.

Hodgman Rubber Co., New York.  
Mattson Rubber Co., New York.

## Horse Covers.

Hodgman Rubber Co., New York.

## Leggings.

Cleveland Rubber Co., Cleveland, O.  
Hodgman Rubber Co., New York.

## Mackintoshes.

[See Clothing.]

## Proofing.

Canadian Rubber Co. of Montreal.  
La Crosse (Wis.) Rubber Mills Co.  
Plymouth Rubber Co., Stoughton, Mass.

## MACKINTOSHED GOODS.

## Rain Coats.

Cravenette Co., Ltd.

## Rubber Coated Cloths.

Mechanical Fabric Co., Providence, R. I.

RUBBER  
FOOTWEAR

## Boots and Shoes.

American Rubber Co., Boston.  
Boston Rubber Shoe Co., Boston.  
Canadian Rubber Co. of Montreal.  
L. Candee & Co., New Haven, Ct.  
Granby Rubber Co., Granby, Quebec.  
Gutta Percha & Rubber Mfg. Co. of Toronto.  
Hood Rubber Co., Boston.  
Liverpool Rubber Co., Liverpool, Eng.  
Lycoming Rubber Co., Williamsport, Pa.  
Meyer Rubber Co., New York.  
National India Rubber Co., Boston.  
North British Rubber Co., Ltd., Edinburgh.  
United States Rubber Co., New York.  
Wales-Goodyear Rubber Co., Boston.  
Woonsocket Rubber Co., Providence.

## Heels and Soles.

Boston Woven Hose & Rubber Co.  
Canadian Rubber Co. of Montreal.  
Continental Caoutchouc & Gutta-percha Co., Hanover.  
Plymouth Rubber Co., Stoughton, Mass.  
Springfield Tire & Rubber Co., Springfield, Ohio.

## Tennis Shoes.

American Rubber Co., Boston.  
Boston Rubber Shoe Co., Boston.  
Granby Rubber Co., Granby, Quebec.  
Liverpool Rubber Co., Liverpool, Eng.  
National India Rubber Co., Providence.  
United States Rubber Co., New York.

## Tennis Soles.

Canadian Rubber Co. of Montreal.  
Jos. Stokes Rubber Co., Trenton, N. J.

## Wading Pants.

Canadian Rubber Co. of Montreal.  
Hodgman Rubber Co., New York.

SPORTING  
GOODS

## Foot Balls.

Canadian Rubber Co. of Montreal.  
Cleveland Rubber Co., Cleveland, O.  
Faultless Rubber Co., Akron, Ohio.  
B. F. Goodrich Co., Akron, O.  
Hodgman Rubber Co., New York.

## Golf Balls.

Boston Belting Co., Boston.  
Canadian Rubber Co. of Montreal.  
Davidson Rubber Co., Boston.  
B. F. Goodrich Co., Akron, O.

## Submarine Outfits.

Hodgman Rubber Co., New York.

## Sporting Goods.

Canadian Rubber Co. of Montreal.  
Faultless Rubber Co., Akron, Ohio.  
B. F. Goodrich Co., Akron, O.  
Hodgman Rubber Co., New York.  
Tyer Rubber Co., Andover, Mass.

## Striking Bags.

Canadian Rubber Co. of Montreal.  
Faultless Rubber Co., Akron, Ohio.  
B. F. Goodrich Co., Akron, O.  
Pure Gum Specialty Co., Barberton, O.

DENTAL AND  
STAMP RUBBER

## Dental Gum.

American Hard Rubber Co., New York.  
Cleveland Rubber Co., Cleveland, O.  
Tyer Rubber Co., Andover, Mass.

## DENTAL AND STAMP RUBBER

## Rubber Dam.

Cleveland Rubber Co., Cleveland, O.  
Daval Rubber Co., Providence, R. I.  
Hodgman Rubber Co., New York.  
Tyer Rubber Co., Andover, Mass.

## Stamp Gum.

Mattson Rubber Co., New York.  
Mechanical Rubber Co., Chicago, Ill.  
N. J. Car Spring & Rubber Co., Jersey City, N. J.  
New York Belting & Packing Co., N. Y.

## ELECTRICAL

## Electrical Supplies.

American Hard Rubber Co., New York.  
Lake Shore Rubber Co., Erie, Pa.  
Joseph Stokes Rubber Co., Trenton, N. J.  
Massachusetts Chemical Co., Boston.  
Tyer Rubber Co., Andover, Mass.

## Friction Tape.

Boston Belting Co., Boston.  
Boston Woven Hose & Rubber Co.  
Canadian Rubber Co. of Montreal.  
Cleveland Rubber Co., Cleveland, O.  
B. F. Goodrich Rubber Co., Akron, O.  
Massachusetts Chemical Co., Boston.  
Mechanical Rubber Co., Chicago.  
Home Rubber Co., Trenton, N. J.  
Revere Rubber Co., Boston-New York.

## Hard Rubber Goods.

American Hard Rubber Co., New York.  
Canadian Rubber Co. of Montreal.  
Joseph Stokes Rubber Co., Trenton, N. J.

## Insulating Compounds.

Canadian Rubber Co. of Montreal.  
Gutta-Percha & Rubber Mfg. Co., Toronto.  
Massachusetts Chemical Co., Boston.

## Insulated Wire and Cables.

National India Rubber Co., Providence.

## Splicing Compound.

Home Rubber Co., Trenton, N. J.

## MISCELLANEOUS

## Architect and Engineer.

Herbert S. Kimball, Boston.

## Cement (Rubber).

Boston Belting Co., Boston.  
Canadian Rubber Co. of Montreal.  
B. F. Goodrich Co., Akron, O.  
Manhattan Rubber Mfg. Co., New York.  
N. J. Car Spring & Rubber Co., Jersey City, N. J.  
New York Belting & Packing Co., N. Y.

## Chemical Analyses.

Durand Woodman, Ph. D., New York.  
H. L. Terry, Manchester, England.

## Chemists.

Stephen P. Sharples, Boston, Mass.  
Durand Woodman, Ph. D., New York.

## Laboratory—Tests, Analyses.

G. E. Heyl, New York.

## Rubber Lands For Sale.

O. H. Harrison, San Francisco.

## Rubber Planting.

Hidalgo Plantation and Commercial Co., San Francisco.  
Mexican Mutual Rubber Co., Chicago.

## Rubber Tree Seeds.

J. P. William &amp; Bros., Heneratgoda, Ceylon.



## MACHINERY AND SUPPLIES FOR RUBBER MILLS.

RUBBER  
MACHINERY

## Acid Tanks.

Birmingham Iron Foundry, Derby, Ct.

## Band Cutting Machine.

A. Adamson, Akron, O.  
Birmingham Iron Foundry, Derby, Ct.

## Belt Folding Machines.

Birmingham Iron Foundry, Derby, Ct.  
Farrel Foundry & Mach. Co., Ansonia, Ct.

## Belt Slitters.

Birmingham Iron Foundry, Derby, Ct.  
Farrel Foundry & Mach. Co., Ansonia, Ct.

## Belt Stretchers.

Birmingham Iron Foundry, Derby, Ct.  
Farrel Foundry & Mach. Co., Ansonia, Ct.  
Hoggson & Pettis Mfg. Co., New Haven

## Blowers.

B. F. Sturtevant Co., Boston  
L. J. Wing Mfg. Co., New York

## Boilers.

William R. Thropp, Trenton, N. J.

## Braidiers.

New England Butt Co., Providence, R. I.

## Buckles.

The Weld Mfg. Co., Boston  
Aiton Machine Co., New York.

## Cabling Machinery.

Birmingham Iron Foundry, Derby, Ct.  
Farrel Foundry & Mach. Co., Ansonia, Ct.  
Textile-Finishing Machinery Co., Providence, R. I.

## Castings.

A. Adamson, Akron, O.  
Birmingham Iron Foundry, Derby, Ct.  
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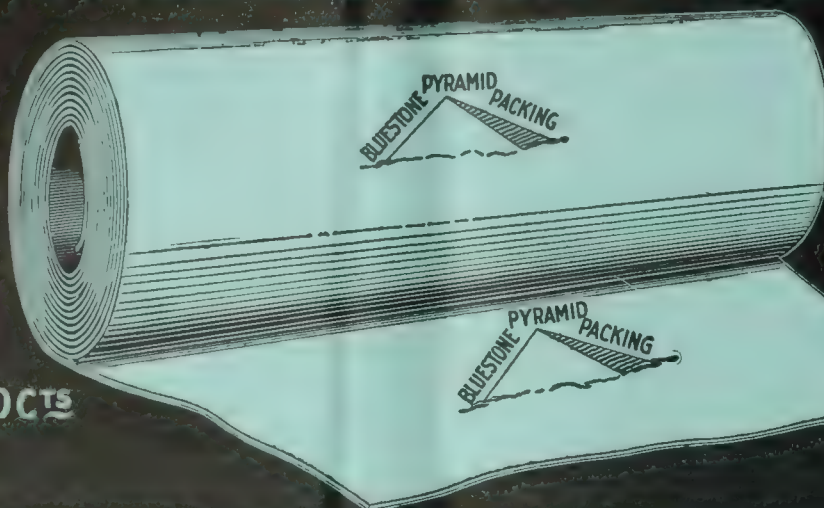
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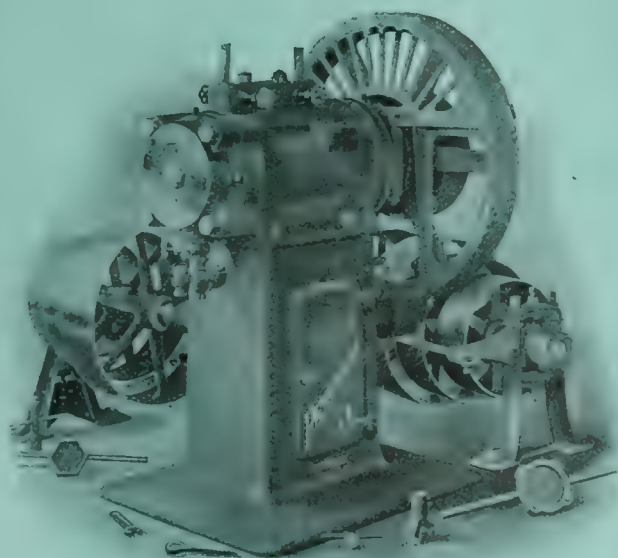
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SEPTEMBER 1, 1905.

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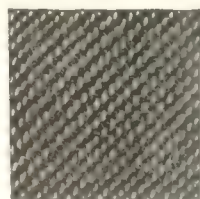
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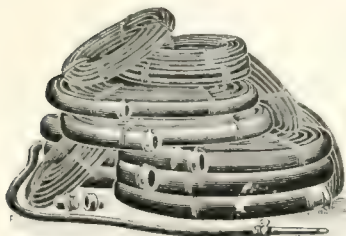


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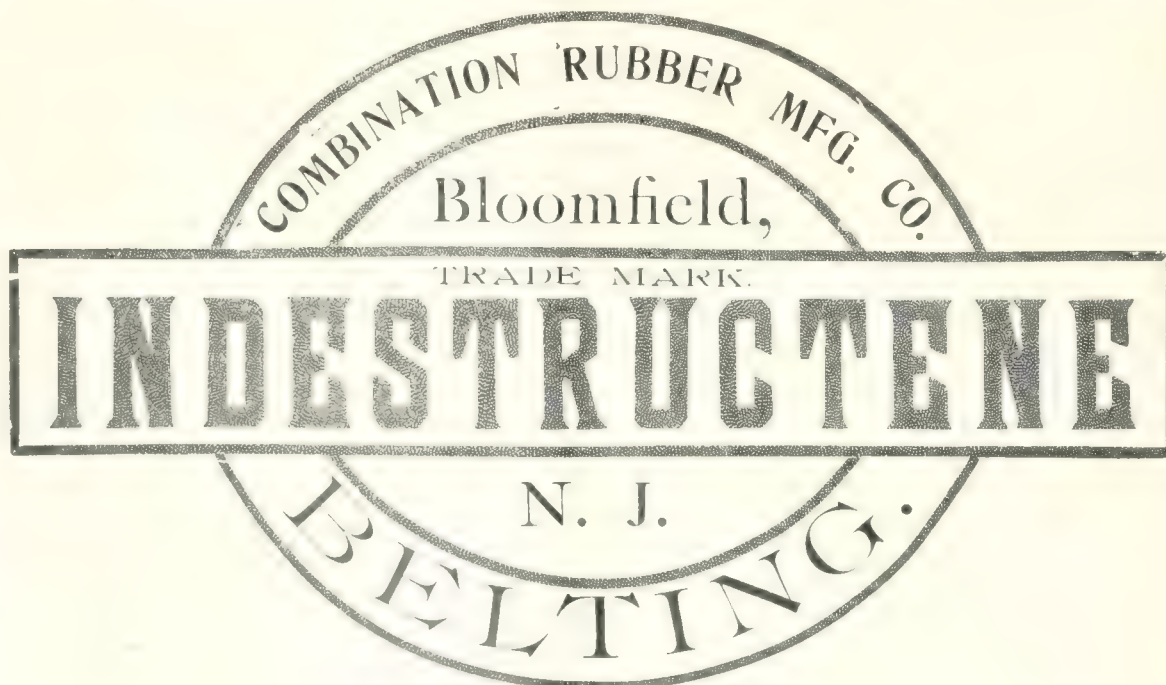
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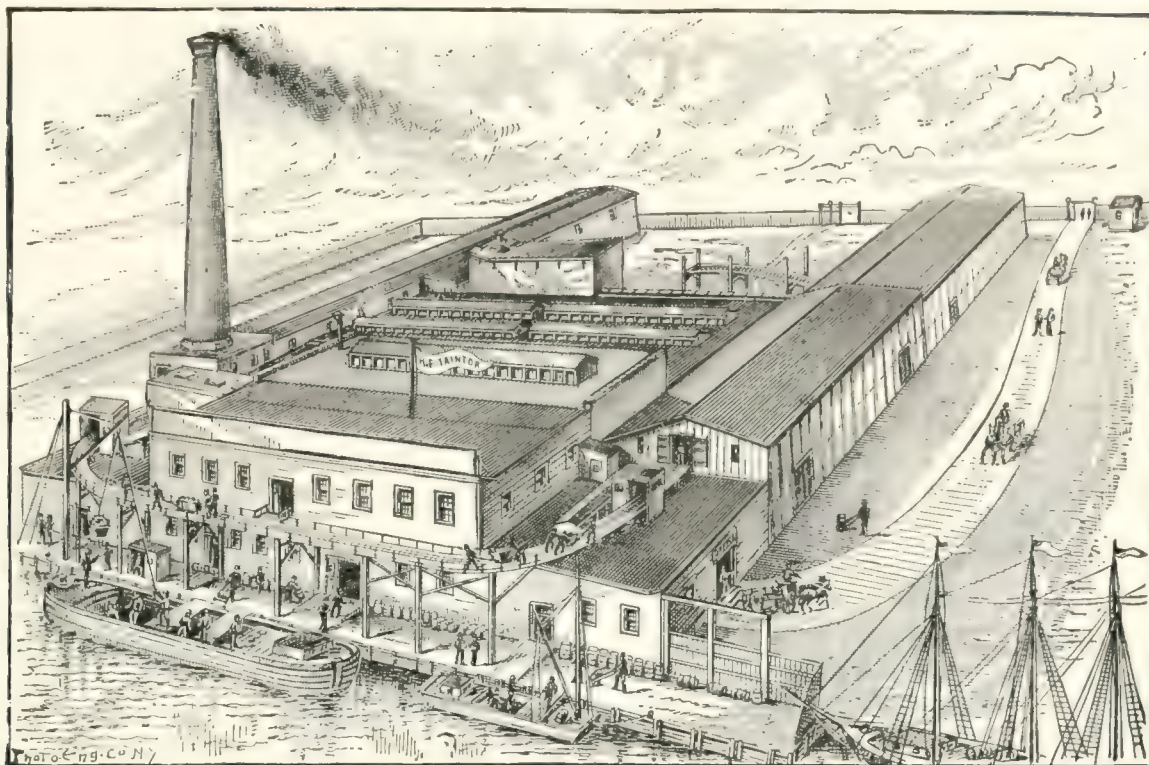
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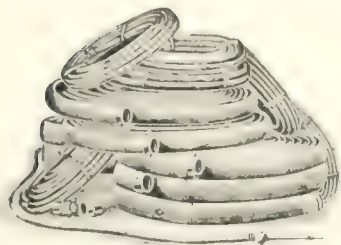
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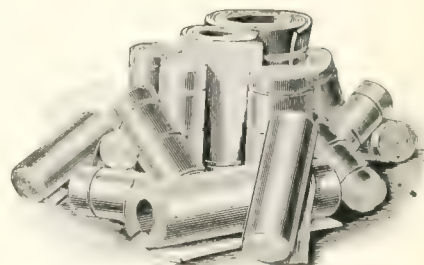
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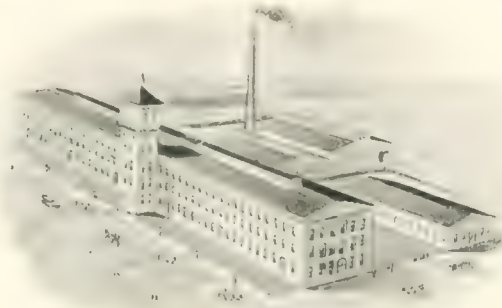
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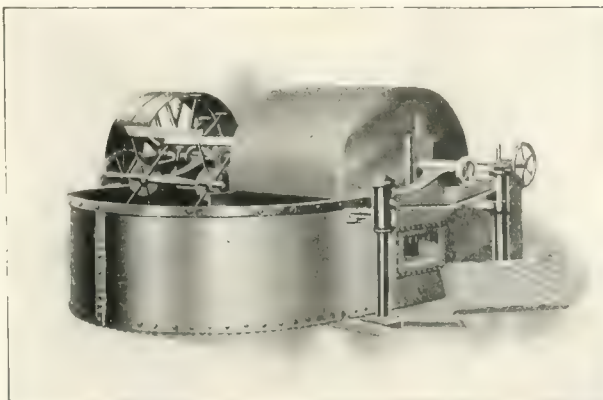
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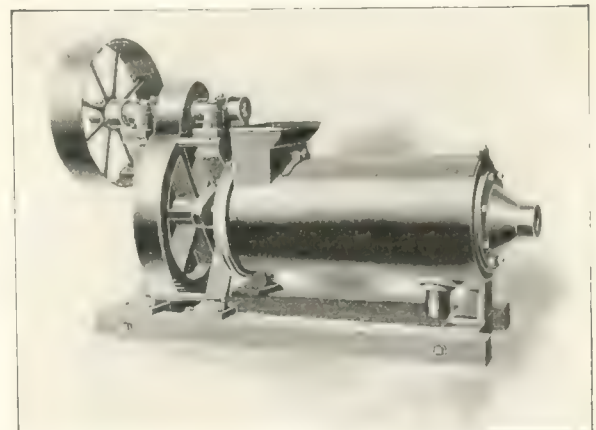
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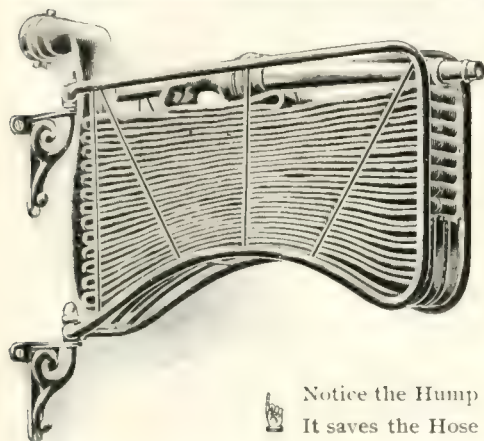
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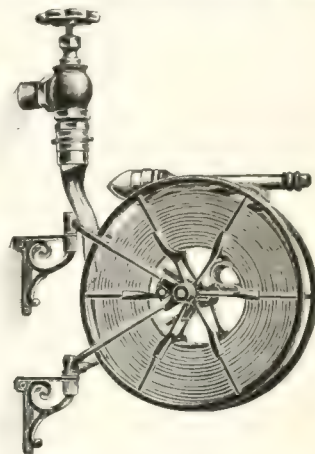
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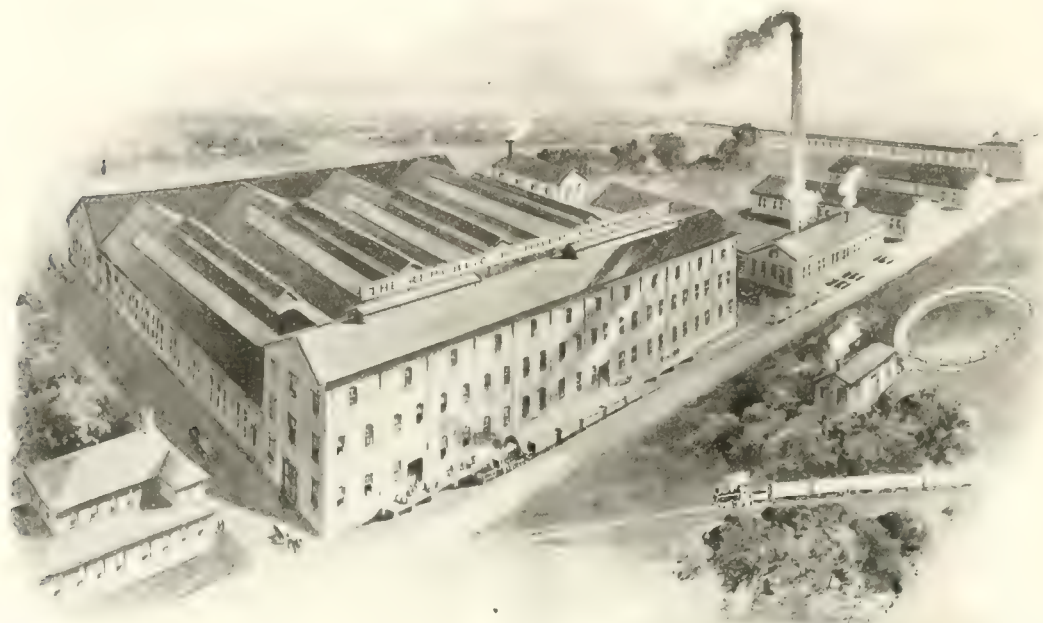
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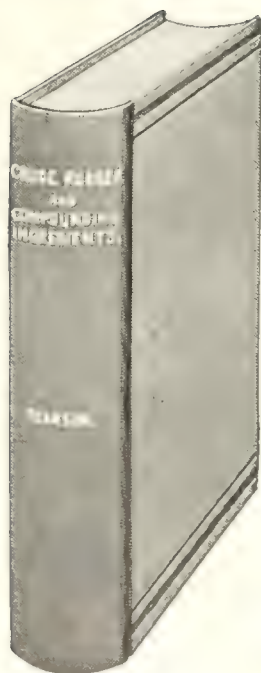


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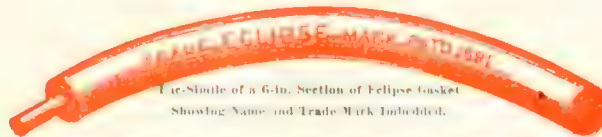


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## DANGEROUS ELECTRIC WIRING.

IN view of the recent destruction of St. Thomas's church, in New York, and some other serious fires charged to defective wiring, it is high time for preventive measures. To be sure it is very easy to make electric lighting a scapegoat in cases where, as is indeed usual, the fire has destroyed all important evidence as to its origin, but it is only too certain that defective circuits are responsible for heavy annual losses, which could for the most part be prevented. There are certain risks which come unavoidably as the result of modern improvements and which must be taken as the penalty of progress. Electrical fire risks do not belong to this privileged class; they are the result in nearly every case of using poor material, of careless installation, or of lamentable lack of foresight in the provisions made for electrical equipment. To strike at the root of the matter, the first cause of disaster is the attempt, which almost rises to the dignity of a national vice, to make about sixty cents do the work of an honest dollar. Let us follow up the matter *seriatim*.

The projector of a building casts about for some practicable means of screwing an extra per cent. out of his investment, and worries his architect into producing a set of plans scamped at every point, on pain of losing his job. The smallest possible allowance is made for wiring, both in space and in money, and when bids are finally called for they are upon a basis from which no honest contractor can work and live. So the cheapest bid gets the work and the bidder, always looking for profit, casts about for cheap workmen and cheap material. The former he can find only too easily and the latter, thanks to the competition forced on the manufacturers, is ready at hand. So into the cheap building cheap goods are put, with little regard to consequences which come in due season, and then follows the usual wail over the dangers of electric lighting. These dangers disappear when first class material is honestly and skilfully installed, and the problem of safety in electrical installations practically resolves itself into a question of business morals.

The fire underwriters being chief among the sufferers have done for many years sterling work in raising the standard of installations, and they have been effectively seconded by the wire manufacturers, but there is precious little use in solemnly issuing lists of approved material so long as its use is not peremptorily enforced. Every time a lax or too good natured inspector lets down the bars danger walks through, and even the underwriters themselves, under the stress of competition, have sometimes winked at the use of questionable material. So long as bad material is placed upon the market it will find plenty of users, and even good material may be so misused as to be dangerous. In our judgment far more electrical fires are due to careless installation than to downright poor wire and fittings. This class is preventable just in proportion as inspectors can be depended upon to do their whole duty in spite of obvious opportunities for temptation. Any insulation can be damaged by violence or placed in a situation where it will inevitably deteriorate. As a rule poor material and



poor work go together, but there are exceptions. In any event no manufacturer is responsible for the misuse of a first class product.

On the other hand the character of his output is a question for the manufacturer's conscience. There is need, real or supposed, for all grades of insulation. In these days the higher classes of rubber covered wire are undeniably expensive, and there is a perfectly genuine need for cheaper even if somewhat less effective coverings. Some of these are entirely safe when used with full knowledge of their properties, perhaps as safe as the most costly, under proper conditions of use. But from these cheaper insulations down there is a wretched series of substitutes and imitations, which reputable manufacturers know only too well in competition, none of them permanently safe in any situation and some of them unsafe in all. These are not made through ignorance, but deliberately to meet the demand for cheap and nasty goods.

Right here and here only is the manufacturer culpable. He knows perfectly well when he is putting out a grade of insulation which no honest contractor would wish to use, and becomes a conscious partner in the latter's rascality. It is a good sign of the times when the fire underwriters and manufacturers get together and agree upon standard specifications for insulation. It will be a still better sign when they mutually agree upon an irreducible minimum of safety and unite to exterminate unsafe materials. If the leading manufacturers would join in turning out no insulation below a certain specified grade upon any excuse whatever, and the underwriters did their full duty of inspection and condemnation, the dangerous wires could be wiped out of existence in a very short space of time. When the contractor can obtain poor insulation only with difficulty and can use or misuse it only at imminent risk of prompt condemnation, we shall hear little more of electrical fire risks. The end is worth the employment of drastic measures enforced without fear or favor.

#### RECLAIMED RUBBER.

PERHAPS no portion of the rubber manufacturing trade is attracting more attention or growing more rapidly than rubber reclaiming. This is shown not only in the new processes that from time to time are made the subjects of patents, but it is also reflected in the forming of new companies, and the erecting of additional plants. The business to-day really divides itself into three classes: First is the manufacture of reclaimed rubber along the standard lines producing either mechanical or chemical rubber, and that solely for sale to manufacturers. Second, the rubber manufacturer who has a plant for reclaiming, which is an adjunct to his own works, and the product of which is used in the manufacture of his own goods. Third, the company with the new process, sometimes a distinct advance over the old and sometimes a freak, which also caters to the general trade.

The high price of crude rubber has so stimulated the interest in reclaimed rubber that most of the above named

types of reclaiming mills are busy and prosperous. Freak processes of course soon drop out of sight just as surely as those that have real merit will continue to live. Indeed, the impulse that leads an inventor in reclaimed rubber or anything else to establish a new method of doing work, is altogether commendable, and is the basis of progress. Were a drop in crude rubber to come suddenly, it would be seen that the individual reclaiming plant and the auxiliary would still exist and still be profitable, because whatever advantage the auxiliary plant may have in utilizing its own scrap or in a lessened cost of operation and superintendence, the individual operator can offset it by the purchase in larger quantities, by a more intimate knowledge of the market, and by concentration of energy to that one particular line, which in itself gives added profit.

Exactly what the future of the reclaimed rubber business will be depends upon two factors, the market for general rubber goods, and the supply of crude rubber. That the former will continue to increase notably from year to year is almost a certainty, and that crude rubber is bound to be an expensive commodity for from ten to twenty years to come is equally certain, all of which argues an increase in demand for reclaimed rubber, added attention to reclaiming processes, and better grades of goods than even the best produced to day.

OUR NEWS OF THE RUBBER TRADE of late has dealt much with increases in the capital stock of manufacturing companies, with the erection of additional factory buildings, and with the enlargement and improvement of machinery equipment. These are all definite indications of a growth of business, which are supplemented by the steady increase in the volume of imports of raw rubber. Evidently the rubber industry is keeping pace with the general prosperity, but there is the further consideration that all the while rubber is becoming a distinctive necessity in more ways, and to more people, so that whenever a check does come to the liberal buying of manufactured products the rubber industry will be among the last to feel it. The demand for rubber is permanent, and must increase. And these conditions exist alike on both sides of the Atlantic. Hence we feel that the planting of rubber trees on a large scale has begun none too soon.

EXPORTS OF AMERICAN RUBBER GOODS continue to increase the figures for the last fiscal year being larger than in any former year, and more than three times as large as the exports ten years ago. This by no means indicates a lessening of the production of rubber goods elsewhere, or in the exports from any other country; it means that the world market for such goods is widening all the time. And while American rubber goods exports are on the increase, it is not at so great a rate as from Germany, for example. Besides, it must be considered that the United States last year imported more foreign made rubber goods than in any preceding twelvemonth.

THE SENDING OF ONE WIRELESS MESSAGE down the Amazon has not prevented the cable company operating in that stream from largely increasing its debenture issues. Considering how much of the time the cable remains a messageless wire its owners, who seem able always to borrow money for mending it, by merely registering a new mortgage, can be complimented upon their financial ability.

## SYNTHETIC RUBBER FROM BASTARD GUMS.

THE trade has so often been disappointed and fooled in the line of synthetic rubber that its bare mention is apt to bring forth a smile of derision. This is chiefly because so many claims have been put forward by those who really possessed nothing but a fraudulent material to sell for cash. A new line of experiment with a certain cheap bastard gum as a base, however, appears to have merit. Mr. G. E. Heyl-Dia, the rubber expert, holds the theory that the resins present in all rubbers are really due to arrested development in the formation of Caoutchouc molecules. As proof of this, he cites the product of young *Castilloas* and all African rubbers, containing often 40 per cent. of resin, and to a less degree all "mediums," while the mature *Castilloa* gives a rubber containing about 7 per cent. and *Hevea* 2.4 per cent.

Further, he believes that the so called bastard gums, containing large percentages of resin, would, if tree, soil, and climate were favorable, be able to produce finished instead of half created rubber. It is a well known fact that the free resins and the percentage of the same in crude rubber largely fix their commercial value and their value in compounded mixings.

Contrary to Mr. Heyl-Dia's views, the endeavor of chemists has always been to eliminate or extract the resins. Suppose the many patented and unpatented methods produced the desired result, there cannot be any commercial value in such attempts, as can easily be seen by a simple valuation. A certain South African loses in washing say 30 per cent.; the percentage of resins is 17 per cent.; the original cost 75 cents. After extraction of the resins one pound of rubber would therefore cost roughly \$1.50, while one pound of pure Pará washed and dried is worth \$1.58 at current prices.

Considering that the intrinsic strength of the extracted medium is not as great as that of "Para," and further that the treatment costs something in addition should make it obvious to manufacturers that all such work is carried on without the slightest hope of any commercial utility. His experiments, therefore, have been along the line of finishing the work that nature has begun. For example, several crude and vulcanized samples shown to the writer come from a common untractable bastard gum, chemically treated, that seems to be actually transformed into an elastic rubber that takes up compound and vulcanizes readily. His first cost on this was 50 cents a pound, and the product from all physical tests looked to be worth eighty cents. That this line of work is of great interest and value none will deny, and the field for such work when one ponders on the low grade gums and resinous rubbers, is very extensive.

## HOW ONE RUBBER FACTORY MAKES MONEY.

"IN spite of the high price of crude rubber our volume of business the last year has not fallen off, while our profits, although a trifle less, are entirely satisfactory."

So said a prominent manufacturer of mechanical rubber goods recently. When questioned as to the policy that he followed to triumph over what has been considered a great hardship to the whole trade he said:

"In the first place we refused every order that did not show a good living profit. Then we raised prices to fit the extra cost of crude rubber. That was hard work, and the tales that our salesmen brought in of rival concerns doing business for nothing would have given us nervous prostration if we had believed them.

"Then, and this is most important, we scaled down our fac-

tory costs—not on paper, but in reality. We thought we had a pretty fair system before, but under the spur of necessity it was marvelous what we were able to do in certain lines. Now if rubber and duck go higher, as they probably will, our prices will be advanced again. Another thing, one half of the talk about present price cutting is all moonshine.

"Every factory has a special advantage in turning out some certain line of goods. That means that they can sell cheaper than some others, and still make a profit. Instead of trying to beat them at their game, I let them have such orders and work along lines in which I know that I have the advantage."

## DEATH OF A CEYLON EDITOR.

THE rubber planters of the Far East have reason to regret the death of Mr. Herbert Henry Capper, senior proprietor and editor of the *Colombo Times of Ceylon*, not only on account of his admirable personal qualities and the ability with which his journalistic work has been done, but particularly by reason of the intelligent support which he has given to all sound planting enterprises in Ceylon and the Straits. Mr. Capper's life was practically all spent in the Far East, where he had a wide experience in affairs, having at one time been in charge of large planting interests after having spent a year in a Mincing lane (London) coffee and produce broker's office. It was this preparation that enabled the *Times* to keep in such close touch with the planting interests which are at the bottom of the prosperity of Ceylon.

## MONEY IN COLORADO RUBBER.

[FROM THE DURANGO "HERALD," AUGUST 5.]

THE two little Odgen boys, who have been watching for a long time for something to turn up so they could make a dollar, were among the first to get out and go to digging rubber weed. They are working industriously every day on Florida mesa and have a large pile of the weed ready to haul in. They will make more money this summer than some of the grown-up loafers will make in the whole year.

## WIRELESS TELEGRAPH ON THE AMAZON.

[FROM "A PROVINCIA DO PARÁ," JULY 24.]

YESTERDAY morning new experiments with the wireless telegraph were made at the town of Pinheiro, between the station at that place and the one at Breves. Several dispatches were exchanged between the two stations, both in code words and in ordinary language, without the occurrence of the slightest error. The following gentlemen, commissioned by the interested New York syndicate, took part in the experiments, viz.: Mr. Boyd, manager of the Amazonas company, and P. Caley, manager of the London Bank.

It must be taken into account that the dispatches from Breves were not sent by professionals, all of those attached to that station being ill. This foreshadows the complete success of the wireless telegraph with us, within a short space of time. The favorable result of the experiments was personally communicated to us by Mr. R. Mardock, who was accompanied by Dr. Americo Chaves. Dr. Americo Chaves went from Pinheiro to Breves, in order to send us from there the following dispatch, which was very correctly transmitted, reaching us at 4.30 P. M.:

Have just attended the wireless experiments. I congratulate myself as well as *A. Provincia* on the splendid results obtained.—AMERICO CHAVES, Pinheiro station.



## AN INSULATED WIRE INSPECTION BUREAU.

**A**N important measure in connection with the insulated wire industry in the United States has been an organization formed among the manufacturers for maintaining the quality of output of rubber insulations, and especially such as are intended for use in connection with fire risks. There have been so many fires attributed to defective insulation that the principal makers of insulating materials decided that active steps should be taken whereby new manufacturers entering the field for this line of goods should be kept up to the certain standard which has been maintained for years by the older companies.

The new organization is known as the Wire Inspection Bureau affiliated with the Underwriters' Laboratories, and the headquarters are at No. 32 Nassau street, New York, where are the offices of the National Board of Fire Underwriters. The president of this new institution is Mr. Ira W. Henry, vice president of the Safety Insulated Wire and Cable Co. (New York), and the treasurer, Mr. J. C. Forsyth, chief inspector of the New York Board of Fire Underwriters. The governing committee embraces also Messrs. W. H. Merrill, Jr., of the Underwriters' National Laboratories (Chicago); C. M. Goddard, chief inspector of the New England Fire Underwriters' Association (Boston); William M. Habirshaw, of the India Rubber and Gutta Percha Insulating Co. (New York), and George A. Cragin, of the American Steel and Wire Co.

The clerical work of the Bureau is carried on by Mr. Hugh T. Wreaks, whom the committee has elected secretary, with an office at No. 32 Nassau street. The objects and methods of the new Bureau are more fully set forth in a circular which has been issued to the trade, and of which the following is a copy:

ON May 22, 1905, a conference was held at the rooms of the National Board of Fire Underwriters. The purpose of the meeting being to devise ways and means of testing all rubber insulated wire manufactured under the rules of the National Board of Fire Underwriters, and to prevent the introduction into commercial use of any such wire which would prove inferior to the standard demanded by the National Board of Fire Underwriters—this to protect reliable manufacturers against unfair competition, and practically preventing any further use of wire with defective rubber insulation.

At this meeting a joint committee was chosen, consisting of six members, to form the "Wire Inspection Bureau." This bureau to draw specifications for testing of rubber insulated wire, manufactured under the rules of the National Board of Fire Underwriters, to decide on such tests, and when and how they are to be made. Also to appoint the necessary electrical inspectors, three being considered sufficient at present, which inspectors shall from time to time visit the testing laboratories of any factories making rubber insulated wire and make, supervise, and verify tests specified by the bureau.

The expenses of these inspectors to be paid by fees collected from the manufacturing companies whose product is tested, each company paying its share in proportion to the amount of wire manufactured.

For the purpose of collecting the money to cover these expenses, stamps will be issued by the Wire Inspection Bureau and sold to the different manufacturers at a charge of one cent per 100 feet of wire tested. These stamps to be attached to the coils of tested wire by the manufacturers themselves, and to

serve as a guarantee that wire so stamped has successfully withstood the tests specified by this Bureau.

The majority of the rubber covered wire manufacturers have recently agreed that on and after October 1, 1905, all National Code wire manufactured by their companies will be made up under the new specifications and duly tested, and will bear identification mark of the Wire Inspection Bureau. It is understood that a reasonable time will be allowed after this date for the disposal of Code wire not bearing the stamp of approval of the Wire Inspection Bureau, on all such wire manufactured before October 1, 1905, and with this understanding the October List of Electrical Fittings will contain the names of all rubber covered wire manufacturers agreeing to the tests of the W. I. B. on their products, and to the use of identification stamps of W. I. B. guaranteeing that these tests have been properly made.

The Wire Inspection Bureau will supply identification stamps to the rubber covered wire manufacturers as may be required by the latter, and on receipt of their order for the same. These stamps will be for 250 feet, 500 feet and 1000 feet coils, and will cost at the rate of one cent per 100 feet. No wire will be considered as having been tested which does not contain an identification stamp. (Stamps to be of linen paper and to be securely fastened to the shipping tags attached to wire coils.) Stamps will have serial numbers and on coils of less than above specified lengths where stamps specify more wire than coil contains, a credit for excess in stamp value can be obtained from the W. I. B. on presentation of the facts in writing, giving size of wire, destination, number of feet and serial number of stamp used. All stamps to be cancelled by manufacturer when used, the date of manufacture of wire also being plainly shown. Wire Inspection Bureau specification giving factory tests which will be required on all wire having approved stamps will be ready in a few weeks, and will be furnished to manufacturers of National Electric Code Wire.

Kindly read this letter over carefully, so that we may be sure that you understand the plan given, and in order that no apparent discrimination may be made against you next October through your not being fully advised of the scope and intent of the Wire Inspection Bureau.

Advise whether or not you decide to avail yourself of the services offered so that we may plan accordingly, and let us know as soon as possible how many identification stamps you will require and the proportionate number for 250 feet, 500 feet, and 1000 feet coils. Respectfully yours,

HUGH T. WREAKS, Secretary.

## ELECTRICAL ENTERPRISES IN PARÁ.

**T**HE Pará Electric Railways and Lighting Co., Limited, was registered in London July 25, with £700,000 [= \$3,406,550] capital, to acquire all existing and certain projected tramway and electric lighting and power undertakings in the city of Pará, and to engage in similar undertakings elsewhere in Brazil. Electric traction is to be introduced on the Pará street railways, and the electric power and lighting plants are to be enlarged. Registered office: 75, Lombard street, E. C., London.

A WESTERN newspaper, in an article on the felt boot industry, states that whereas in earlier days most of the product was sold to lumbermen, at least 65 per cent. is now worn by farmers.

## THOMAS W. LAWSON AS A RUBBER HISTORIAN.

TIME is a great unraveller of mysteries. Conditions change from year to year, and the necessity that once exists for keeping secret facts concerning important combinations and movements in industrial or financial circles may disappear and the public learn more or less of the truth. During the month just closed, through the publication of an article in a leading New York magazine, new light was thrown upon what has been considered one of the most elusive mysteries in rubber history.

When the United States Rubber Co. was organized in 1892, with a capital of \$50,000,000, its purpose was the consolidation of the largest manufacturers of footwear in the country. The hope was entertained that the company would be able for a long time to control the entire output of this line of goods in the United States, but at the end of ten years there were a dozen or more independent rubber shoe factories in the field.

It was at this time that influential capitalists who had watched the development of the rubber industry, and thoroughly understood the conditions then obtaining, decided to consolidate these independent companies under one management—and that not antagonistic to the United States Rubber Co. Conferences were held between these capitalists and the representatives of the factories at the Waldorf-Astoria (New York) in January 1901, and in the end a working plan was adopted. Among those interested in the promotion of the scheme was James R. Keene, one of the oldest and shrewdest of Wall street speculators. It was given out that through Mr. Keene's influence the Standard Oil Co. had subscribed \$7,500,000 to the capital stock of the new company, which was to be known as the Standard Rubber Shoe Co. or by some other such name.

Options were secured on a number of the independent factories and subscriptions to the proposed capital stock of \$15,000,000 were coming in, when, for reasons not made public, the support of the Standard Oil Co. was withdrawn. The scheme at once went to pieces.

On December 24 1900, the International Crude Rubber Co., with an authorized capital of \$30,000,000, was incorporated under the laws of New Jersey, for the purpose of dealing in crude rubber. The list of directors published at the time included the names of Charles R. Flint, then one of the leading importers of crude rubber; Henry H. Rogers and John D. Archbold, both directors of the Standard Oil Co.; Albert C. Burrage, president of the Amalgamated Copper Co., and representatives of the United States Rubber Co., in which at that time Mr. Flint was an influential director. The avowed purpose was the consolidation of the crude rubber importing interests in America, under auspices in harmony with (1) the United States Rubber Co., (2) the proposed new consolidation of the independent rubber shoe companies, and also (3) the Rubber Goods Manufacturing Co., a consolidation of mechanical rubber goods factories brought about in 1899 through the agency of Mr. Flint.

The newspapers were full of the crude rubber cornering project. Mr. Flint told the reporters who sought interviews with him that Standard Oil interests would be largely represented in the enterprise. As is always the case in the promotion of big schemes in Wall street this fact did much to strengthen the position of the International. But coincident with the dropping of the plans for the Standard Rubber Shoe Co.—for which, by the way, no incorporation papers were ever filed—the International Crude Rubber Co. suddenly ceased to be talked about.

Indeed, it was never heard of again, in public, except in connection with the failure of Mr. Flint's older concern, the Crude Rubber Co., in January, 1902, when the charter of the International Crude Rubber Co. was used to cover some of the details of the liquidation.

Here were two great enterprises, which were promised by their promoters to revolutionize the rubber industry, that suddenly failed, ostensibly because the Standard Oil octopus had withdrawn its influence and support after both had been pledged to their promoters. The question that was on everybody's lips at the time was: "What has happened?" The newspapers tried to find out but without success. There were many guesses but none were satisfactory.

The man who now comes forward and throws "the lime light of publicity" on the mystery is Thomas W. Lawson, of Boston, who has been contributing a series of articles on "Frenzied Finance" to *Everybody's Magazine* (New York). In the September issue Mr. Lawson devotes several chapters to James R. Keene and his connection with Amalgamated Copper stocks and the rubber companies already alluded to. Lawson, by the way, is one of the most erratic and sensational speculators of recent years. He has been connected with some of the largest financial schemes recently floated in America, and is reputed to be worth several millions of dollars. He was formerly interested with Henry H. Rogers, of the Standard Oil Co., in several heavy transactions, but especially in Amalgamated Copper.

It was through his association with Mr. Rogers in the latter company that Mr. Lawson secured the information which he now makes public in *Everybody's Magazine* concerning James R. Keene, one of the most fearless and skilful financial speculators in the United States. Mr. Keene has made and lost half a dozen fortunes during his long career. Although now well along in years, whenever he makes a move on the Wall street checkerboard he is still watched with absorbing interest by all the experts in the game. He has sources of information that enable him to know what is going on and what is going to happen in the financial district. He is thus in a position to take advantage of every twist and turn of the market.

Mr. Keene got his start in life in Carson City, Nevada, where Mackay, Flood, Fair, and O'Brien were carving out fortunes. He then went to San Francisco where, through daring speculations in "Bonanza" silver mining stocks which were especially active at the time, he succeeded in accumulating several million dollars. With this in hand in ready cash he proceeded to New York, which he believed offered a broader and richer field for his speculative genius. It is at this point that Mr. Lawson takes up Mr. Keene's career.

To recite the Lawson story briefly, Mr. Keene had not been in New York long before he had parted with every dollar of his fortune to the native stock speculators. Having had his eye teeth cut by this experience, Keene started in to make another fortune. The celerity with which he recovered his standings and fortune attracted much attention and he was speedily hailed as a new wizard of finance. His enemies were disconcerted, for they feared that he would devote his attention to bringing about their ruin. They never could tell what he was doing until he was ready to explode his move and when that little ceremony had been performed they picked themselves out of the wreck sadder but wiser men.



One day it was discovered that some one was manipulating Amalgamated Copper stock in a manner that surprised the members of the inner circle. Apparently one of the heavy holders of stock was selling his shares. Both William Rockefeller and Henry H. Rogers, of the Standard Oil Co., who were known to carry large blocks, denied that they had parted with a single share. Traps were set and it was soon found that James R. Keene had managed to get hold of Mr. Rockefeller's secretary and through information thus secured had been able to take advantage of all the inside news concerning the company. The secretary was promptly discharged, and Mr. Keene's name was placed on the "black list" in the office of the Standard Oil Co.

Soon after this, while Mr. Keene was engaged in acquiring the Third avenue street railroad in New York, a raid engineered it was asserted, by the Standard Oil crowd, was made on the stock, and the company was forced into bankruptcy. Mr. Keene, to recover from the blow, sailed for Europe, where he spent several months.

In the meantime Amalgamated stock had fallen into disrepute. No one wanted to buy it, and the price declined alarmingly. Lawson told Mr. Rogers that something would have to be done at once if the company was to be saved from absolute disaster. The latter agreed that the situation was grave, but how could it be improved? Mr. Lawson replied that the only man who could put new life into the enterprise was James R. Keene.

For some time Mr. Rogers would not even consider the suggestion. He bitterly hated the man who had seduced Mr. Rockefeller's secretary and would have nothing to do with him. But when he saw Amalgamated stock fall still lower he realized that his personal feeling toward Keene should not be allowed to stand in the way and consented to Lawson's plan to bring the two magnates together. As the outcome of the conference Mr. Rogers agreed that the Standard Oil Co. would subscribe \$7,500,000 toward the capital required for consolidating the rubber interests in which Mr. Keene was then interested, provided the latter would put his shoulder under the Amalgamated wheel and lift it out of the mud.

Under this agreement Keene at once began work. His influence was soon felt in the street and within a remarkably short period he had sold 293,000 shares of stock at \$22,000,000 net for Mr. Rogers and his friends.

When Mr. Rogers promised Mr. Keene the support of the Standard Oil Co. in promoting the Rubber company he did a great thing for the latter project. Keene naturally made all the capital he could out of the matter. It was taken up by investors and success appeared certain when the blow fell that knocked the enterprise in the head.

It was on the day that Keene had made the final payment to Mr. Rogers on his purchase of a block of "Flower pool" stock and had turned in the last installment of cash on account of the sale of the \$22,000,000 worth of Amalgamated that he received the following note from the oil magnate:

You may now cancel our subscription of \$7,500,000 to your rubber company, and please announce to the public or I will—that we will have nothing more to do with it.

Mr. Lawson, who was in Rogers's office when the note was written, and to whom it was shown before mailing, says of the incident in his article:

"I looked up at Mr. Rogers prepared to remonstrate, but I caught the expression of his face and I got no further. Never have I seen on human countenance such a look of devilish satisfaction. He spoke, and then I realized that the man's nature knew no relenting, and was incapable of forgiveness, and that

he felt as bitterly against the man who had seduced his trusted employé as though the man had not since waded through blood and fire to prove his repentance; as though he had not conferred on the property and the credit of him whom he had sought to injure benefits absolutely inestimable.

"It was a staggering blow to Keene. He saw the result of his magnificent work fall and vanish like a tower of cloudland, yet he dared not resent what had been done to him."

When a representative of THE INDIA RUBBER WORLD asked Mr. Keene if Lawson's story of his connection with Standard Oil and Amalgamated was true, he replied:

"All the statements in which my name is connected with Mr. Rogers and Mr. Rockefeller or any one connected with them are pure fabrications. I do not know Lawson and have never had any business dealings with him. At one time Mr. Rogers and myself seriously considered the advisability of solidifying the various interests in the rubber business, but it never got far beyond the preliminary stages, owing to a defalcation by the treasurer of the rubber companies which Mr. Rogers heard of, and we abandoned the idea."

Regarding the beginning of the interest of Mr. Keene in rubber, it has generally been accepted as a fact in the trade that through representations made by Charles R. Flint, Mr. Keene was induced to purchase the holdings of Robert D. Evans in the United States Rubber Co. when the latter retired from the presidency of the company, and also later to invest considerable money in the Rubber Goods Manufacturing Co. In April, 1902, the control of the last named corporation passed into the hands of Mr. Keene and his friends, with Talbot J. Taylor in the lead, the board of directors at one time being made up largely of the employes of Talbot J. Taylor & Co.'s stock brokerage office. The consolidation movement which Mr. Keene, with Standard Oil support, is reported to have been interested in promoting, was to bring other important rubber manufacturing interests, directly or indirectly, under the same general control with the two companies named above.

G. H. C.

#### MR. RUCKER'S TIRE PROFITS AND LOSSES.

IT will be remembered that when one Ernest T. Hooley came into such prominence as a promoter in connection with the flotation of the Dunlop Pneumatic Tyre Co., Limited, by which he was reported to have made some £2,000,000 profit, he had associated with him Martin D. Rucker, who had been already interested with him in company promotions. Mr. Rucker was recently examined before the London bankruptcy court, at which time he told the story of his financial career, when he said that the net profit divisible between himself and Hooley from the tire deal was something like £1,000,000, and he actually received £401,241 from that gentleman in cash, bills, etc., together with other valuables, making in all a profit of £458,641 [=£2,231,976 43] as his share in the Dunlop transaction. Later Mr. Rucker purchased estates and figured as an owner of race horses and yachts, but instead of investing his capital and living upon the income therefrom, he used it and lost it in various speculative investments. At the hearing above referred to, the statement of affairs submitted for Mr. Rucker showed total liabilities of £12,643 (unsecured £12,081) and assets £30 [=£146], absorbed in the preferential claims.

THE Ideal Comb and Novelty Co. is the name of a new concern which will manufacture celluloid combs and novelties at Northboro, Mass., under the management of Frank H. Foster.

## THE KLEINERT RUBBER CO. AND ITS HEAD.

THE celebration of the seventy-fifth birthday of Mr. Isaac B. Kleinert, president of the rubber company bearing his name, at his summer home at Fleischmanns, Delaware county, New York, on April 19, was attended by

was incorporated under the laws of West Virginia as The I. B. Kleinert Rubber Co.—a close corporation of which Mr. Kleinert is president, and the active heads Mr. H. A. Guinzberg treasurer, and Mr. Victor Guinzberg, secretary.

a most agreeable surprise, in the shape of a tribute from all of the employes of the Kleinert company throughout the world. At 10 A. M. there arrived at Mr. Kleinert's home a delegation of twelve representatives of various departments of the company's business in New York and at College Point, headed by Mr. Wilcox, of the New York office, bearing a massive silver loving cup, suitably inscribed, the cost of which had been defrayed by over 1200 persons employed by the company in the United States, Canada, Europe, South Africa, and Australasia. Only Mrs. Kleinert had been let in the secret in advance, in order that arrangements might be made for the entertainment of the guests, who, after an informal presentation and the acceptance of the gift by Mr. Kleinert, were taken for a drive amid the beautiful surroundings of the Kleinert residence. Later dinner was served, after which the visitors returned to New York city.

The loving cup, of which an illustration is given herewith, stands 18 inches high, on a base of solid silver ornamented with floral designs, 8 inches high and 15 inches in diameter, but which is not shown in the photograph from which the illustration was made.

As indicating the pleasant relations which exist between Mr. Kleinert and his employes, it may be said of the committee of twelve charged with the presentation of the loving cup that they had been connected with the company for periods of 17 to 25 years, with the exception of one man, who had been in his position for only 8 years.

Mr. Kleinert came to the United States from Berlin in 1850, soon becoming a naturalized citizen. He has become a thorough American in sentiment and from the date named his business interests have always been identified with his adopted country. Since his eighteenth year it is stated that Mr. Kleinert has always been an employer, and, it may be added, a successful one. After settling in New York he engaged in the hat and cap trade, to which he afterward added on a large scale ear muffs. About 26 years ago he became interested in the manufacture of dress shields, which has grown until it now forms the principal element of his business. About 15 years ago the business



ISAAC B. KLEINERT.



THE LOVING CUP, WITH THE INSCRIPTIONS ON THREE SIDES.

A TOKEN OF ESTEEM FROM THE EMPLOYEES OF THE I. B. KLEINERT RUBBER CO. THROUGHOUT THE WORLD.

PRESENTED TO MR. ISAAC B. KLEINERT ON HIS SEVENTY-FIFTH BIRTHDAY.

AUGUST 19, 1905.

The business in dress shields was nowhere important at the date of Mr. Kleinert's becoming interested in it, and the sale of such goods in America was largely of French origin. In fact, when he first approached New York dry goods and notion houses to find a market for his own product, he found it necessary in order to induce them to take his goods on sale to supply them with French labels—though there was no claim made on the labels that the goods were made abroad. At the end of the first year Mr. Kleinert insisted that he was able to make not only as good shields as were imported from France but better ones, and that he would thereafter label his goods in English and add his own name as the manufacturer.

From that time the business has grown steadily in volume, until the Kleinert factories not only supply the greater part of the demand in the United States, which meantime has become enormous, but a large export trade has been created. It is understood that the larger part of the demand of dress shields in Europe is supplied by the Kleinert company, except in France and the German empire, where heavy protective duties exist for the benefit of the domestic manufacture, but even in these countries the Kleinert company has an important trade, especially in the finer grades of goods. The business of the company is conducted in its own name in every important center in Europe—there are two selling agencies, for instance, in Russia—together with agencies in Cape Town, Australia, and New Zealand. In the warmer countries of Asia and South America, where the demand for goods of this kind is smaller, the sales are made through agents instead of branch houses bearing the company's name.

Recurring to the time when dress shields required a French label to sell them in this country, it may be mentioned that during a recent year only 6 dozen French dress shields were imported into the United States, and these were of chamois skin and consigned to a newly arrived French *modiste* not acquainted with American conditions.

The Kleinert dress shields are of three classes: (1) the "light weight," made by spreading prepared rubber on muslin; (2) the "gum shield," made by placing a



layer of pure gum between two layers of muslin; and (3) the "stockinet" shield, made by calendering prepared rubber between two pieces of stockinet. The stockinet shields, by the way, were the first made by Mr. Kleinert or by his competitors in this country. The development of the other classes of goods has been the result of continuous experimenting, in which Mr. Kleinert has taken an active and leading part. Dress shields are made for sale at prices ranging from \$4.50 to \$100 per gross, the higher priced goods involving the use of silk. It may be mentioned that chamois skin goods have practically disappeared from the American market during the past 15 years.

The manipulation of the rubber used by the Kleinert interests is carried on at College Point (near New York), where all the rubber entering into the Kleinert shields is prepared. Several hundred hands are also employed at College Point in the making of dress shields. The greater part of the dress shields are made, however, at No. 725 Broadway (where 20,000 square feet of floor space are used) and two other factories in New York. There is also a factory at Toronto, Canada, which is supplied with prepared rubber from College Point.

Mr. Kleinert has invented a number of machines for use in the manufacture of dress shields, which have been patented, and he has also taken out many patents on shields. Many of these patents are still valid. Mr. Kleinert has always taken a special interest in the manufacturing end of the business, leaving the selling departments in recent years to the other members of the company. He receives reports daily from the factories and during the eight months of the year which he spends in the city he is an almost daily visitor to College Point. Mr. Kleinert is understood to have an expert knowledge of rubber and its manipulation.

In addition to dress shields the products of the Kleinert Rubber Co. embrace a large variety of suspenders, hose supporters, and like goods; besides which, they have during the last two years built up an extensive business in dental rubber and rubber dam.

Mr. Kleinert's city residence is at No. 31 West Eighty-seventh street. Four months in the year he spends at his country home at Fleischmanns. Next to the conduct of his business his chief interest for many years has been in promoting the welfare of his employes through associations which they are encouraged to join and support to a certain extent by the payment of periodical dues, though the expenses are really largely met by contributions from the company and from Mr. Kleinert's private purse. Two such associations exist in New York and at College Point, both incorporated under the laws of the state. Members of these associations—the employes are mostly girls, except in the factory devoted to working rubber—receive a stated weekly salary in the case of illness, besides which medical attendance is provided free. Besides the members have a day's outing twice a year.

#### THE UBERO PLANTING COMPANIES.

THE reorganization committee of the *Ubero Plantation Co. of Boston*, mentioned in the last INDIA RUBBER WORLD (page 363) have sent a circular letter to the shareholders of that company, outlining a plan for a further subscription of stock with a view to having the company discharged from the receivership, to the taking of steps to acquiring possession of the plantations in Mexico, and the continuance of the business, it being stated that Messrs. Stedman and Hood, officers of the company, will, if the amount asked for is subscribed, subscribe a substantial amount in addition and thus complete the total amount estimated by the committee to be essential. Responses

to this circular were asked for prior to the annual meeting of the company at Kittery, Maine, on August 11. At the date mentioned the attendance of shareholders was so small that an adjournment was had to a later date.

\* \* \*

PLANS are also on foot for the reorganization of the *Consolidated Ubero Plantations Co.* Circulars have been issued to the bondholders of this company by a committee announcing that they hold all the mortgage bonds of the company which may be deposited under certain conditions with the International Trust Co., of Boston, and the circular outlines the conditions recommended by the committee for the reorganization of the company in the event of a majority of the bonds being so deposited.

\* \* \*

IN the suit of Henry C. Parker, of Woburn, and others, against the officers of the *Ubero Plantation Co. of Boston*, seeking to recover damages in case the court may find that negligence existed in the management of the company, the plaintiffs filed a motion for leave to amend the bill to permit an accounting to be sought from the individual defendants in case gross neglect on their part should be proved. On August 10 Judge Lawton, of the superior court, granted the motion for amendment prayed for.

\* \* \*

HUGH W. OGDEN and Jeremiah Smith, Jr., receivers for the *Ubero Plantation Co. of Boston*, on July 31 filed a suit in equity in the supreme judicial court of Massachusetts, against Ferdinand E. Borges, seeking to recover the moneys paid to him from the funds of the company. The complaint sets forth that Borges was one of the organizers of the company, was the holder of a number of shares for none of which he paid anything, that as business manager he was in actual control of its affairs, and that he improperly converted large sums of money to his own use. Seventeen life insurance companies, including the Equitable Life Assurance Society, are made co-defendants with Borges, the bill alleging that he has paid to them amounts aggregating \$50,000, and an accounting by them is prayed for.

#### FIRE DEPARTMENT CARTS.

AN extensive variety of factory, village, and fire department hose carts is illustrated in Catalogue B of the Wirt & Knox Manufacturing Co. (Philadelphia), which is just out of press. In this catalogue larger illustrations are used than was possible in the old edition, thus showing the goods to better advantage. The firm are also introducing several new styles of hose carts, including their new Forged Frame cart, which is referred to as having special advantages; a Fire Department Jumper, and a new size of Factory Hose Cart. These carts are constructed in a high degree of perfection, being thoroughly well made and handsomely finished. The company will be pleased to supply copies of this catalogue to village and other fire departments and whoever else may be interested. [9 1/2" x 6". 20 pages.]

THE Société Française d'Agriculture Coloniale (French Society for Coloniale Agriculture) held in Paris in June an international assembly devoted to the discussion of the topics embraced in the society's scope, in connection with which an exhibition of colonial products was opened. The program in various ways recognized the importance of Caoutchouc, which was catalogued in Class I (products of cultivation), Class III forest products), and Class V (products of colonial industries).

## THE INDIA-RUBBER TRADE IN GREAT BRITAIN.

*By Our Regular Correspondent.*

**T**HE recently issued prospectus of the Motor Pneumatic Tyre Co., Limited, has met with a good deal of adverse criticism in motoring circles. The company acquires from the British Motor Tyre Syndicate of Manchester the Seddon tire patent, the benefit of agreements for the sale of the American, French, and Belgian patents, and an agreement for the manufacture of the tire by David Moseley & Sons, Limited. For this the sum of £150,000 is asked. The Seddon patent, it may be mentioned, has yet twelve years to run, but the company acquires no works or premises—merely an agreement to give one firm the monopoly of manufacture. The fact that the vendor is to get £10,000 for underwriting £50,000, the minimum on which the directors will go to allotment is rather significant of doubts as to the public response, seeing that such underwriting is usually done at 5 per cent. and not 20 per cent. These comments have to do merely with finance and do not touch on the intrinsic value of the tire. The estimates of profits are based on the supply of 5 per cent. of the motor tires used in Great Britain. This does not seem an extravagant estimate, but from what I gather it is still some way from attainment. Motor tire repair outfits are being extensively advertised by an increasing number of firms, among whom I may mention Harvey Frost & Co. (London), as having made a name for their H. F. vulcanizer. With regard to the matter generally, however, I do not find any overweening anxiety on the part of motorists to burden themselves with such extra tackle. They have quite enough to do they say without acquiring the rubber manufacturer's art. It is more advisable in their opinion, to carry some spare tubes and replace the punctured one. This is then sent to a repairer, who puts a patch on for 1s. 6d. in the course of a few days. It is customary in the case of a new car for the buyer to specify the make of tire he wants and this is fitted at the same cost for all tires. In the case of new tires, the market price of the particular tire wanted has to be paid. At present Michelin's continue the dearest, though on all sides one hears that it is worth the money. Moseley's new tire can be bought at a cheaper rate and it is favorably spoken of, more particularly on account of the ease with which it can be attached or detached. The chief disadvantage to it in the case of motorists who are not too well off, is that it requires a special wheel and it is the prospective purchase of this which has militated against its more general adoption. However, despite the progress made by British firms, very little inroad has been made upon the supremacy of the Michelin and Continental motor tire business, and the British makers admit that their progress is slow, though they do not admit the superiority of the French and German makes. Now that ignition is being generally carried out by voltaic electricity at a pressure it is said of 30,000 volts, special high tension cable is necessary. This is now sold in different qualities from 1 to 3 shillings per yard and as a breakdown would prove a serious matter, the best quality, with a very strong rubber insulation, has the greatest sale. This connects the sparking plug with the storage battery carried on the motor. The Sphinx 20 ampere-hour battery is in great favor, dry batteries having proved somewhat unsatisfactory.

THE publicity given in all sorts of newspapers and journals to the bottle ring scare has naturally caused the topic to be dis-

RED  
RUBBER  
DANGERS.

cussed by all sorts of people whose knowledge of the rubber trade is infinitesimal. I have been an amused listener to conversations on the subject at garden parties, etc., where the mineral water bottle has made its appearance and have been told that the beverage contains a large amount of antimony in solution. "Cheap, convenient, and killing," is the headline of an article that has gone the round of the papers and which is still in circulation. As I think I have said before it seems to me that the only danger to be apprehended is from particles of the worn rings being swallowed. As long as rings which are worn or decayed are kept in use it is advisable to take care that any sediment at the bottom of the bottles is not poured into the glass. A warning on these lines might usefully be given in the press to the public; it would be far more in consonance with the facts than are the alarmist paragraphs that have appeared. The *Lancet* of June 24 in an editorial says: "The use of a mineral compound containing an undoubtedly poisonous metal is always undesirable even in small quantities, where articles of food and drink are concerned." The *Lancet*, however, is a notoriously alarmist journal and its warnings against this or that alleged danger to human life do not often result in action.

AT the annual meeting held in London in July the American visitors did not include any representatives of the rubber trade as far as I was able to ascertain. The meeting was mostly given up to festivities and was favored by exceptionally fine weather. One item which was arranged at the eleventh hour was a reception at Dorchester House, Park lane, the new home of the American embassy, by Mr. and Mrs. Whitelaw Reid, whose hospitality was much appreciated. Another item of even greater interest was the unexpected reception at Buckingham Palace of six of the prominent members by the King. The command came during the progress of the garden party given by Mr. and Mrs. Fletcher Moulton and naturally caused a flutter of excitement. The two Americans received were Mr. W. H. Nichols, of New York, the president of the society, and Professor Chandler, of Columbia University, a past president.

SOCIETY OF  
CHEMICAL  
INDUSTRY.

FINANCIAL  
RESULTS.

THE recently issued report of the Leyland and Birmingham Rubber Co., Limited, is not particularly cheerful reading for the shareholders, though its tenor was not unexpected after the adumbration of the chairman at the last meeting. As the principal rubber works in this country, or at any rate some of them, are in private hands, and do not publish their results, it is not possible to attempt any general review of the effects produced by the continued high price of the raw material. It may safely be said, however, that the financial results of the different firms are not at all in uniformity. In some cases largely diminished profits are shown; in others the results are considered quite satisfactory. One of the largest firms say they have made quite as much money in the last twelve months as in any of the last few years, though it was added that they had to work harder for it. It would seem then that the very numerous issues upon which a successful business depends have still a potency as regards the profit and loss account and that the market price of the raw material is only one factor, albeit a dominant one. As regards the north of England, the booming



times in the cotton trade of which so much has been heard are not universal in Lancashire. It is only in particular districts that much money has been made and now in these we are at the time of writing threatened with a strike of such magnitude as must assuredly affect the general prosperity of the country to a serious extent—supposing it comes to fruition.

THE retirement of Mr. J. K. Burbridge from the firm of Messrs. William Warne & Co., Limited, of Tottenham, has caused surprise among his numerous acquaintances, and friends in the rubber trade. I understand that he is farming in Australia, though have no definite information whether it was a breakdown in health which caused him to transfer his energies to so widely different and distant a field. Mr. Burbridge studied chemistry in Germany and had control of the laboratory at Messrs. Warnes. Of late he had acted as an abstractor for the *Journal* of the Society of Chemical Industry as regards foreign contributions to the chemistry of India-rubber and Gutta-percha. The emoluments of such work are only trifling, but it keeps the abstractor up to date with research. I imagine the Editor will find some difficulty in getting a successor to men like Dr. Weber and Mr. Burbridge, who combined literary attainments with scientific and technical knowledge.

THERE is hardly anything to attract the attention of the rubber manufacturer at this exhibition, the main object of which after all is to provide people with an open air lounge. The Cape Asbestos Co. have a good show of their various manufactures, and it is evident that this industry is making rapid strides in the Colony. It is claimed for the blue asbestos that it has great elasticity and is superior to white asbestos both with regard to liability to sag and in being quite rot proof. Its chief use seems to lie in mattresses for steam boilers, the loose fiber being placed between two layers of cloth and stitched through. The London address of the company is 8, Minories, E. C.—James Walher & Co., of the Lion Works, Garford street, West India Dock road, London, show a good assortment of their "Lion" packings, jointings, etc., for high pressure steam. In the "Wallies" sheet jointing a steel wire gauze is covered on both sides with a jointing material of the finest quality. The sheet jointing is a combination of woven wire and heat-and-water-resisting material. Considering the importance of high pressure packings on steam vessels, it is somewhat surprising that other makers have not exhibited, especially as a good deal of energy has been expended in England during the last two or three years in producing packings on American lines.

COLONIAL and Indian produce in great variety is to be seen this summer at the Crystal Palace, London, and naturally raw rubber is to be seen in the West African exhibits. Among the Gold Coast samples is the soft Akim from the *Funtumia elastica*, the pure rubber and that which has been mixed with spurious rubber juices being shown. White Krepi ball from the *Landolphia owariensis* is also shown. This rubber is coagulated either by lime juice or by rolling on the body of the collector. Some thin sheets of Pará buscuit are to be seen, and the visitor is notified that although this plantation grown rubber is not yet on the market local reports are to the effect that its cultivation promises well. Samples of Salt Pond nigger and hard Asanti lump are also shown, as well as herbarium specimens of the principal native rubber trees and the instruments used by the collectors. It struck me that the exposure of the rubber to the sun's rays might account for the sticky appearance of some of the samples, and on my mentioning this to the attendant in charge he said that the particular samples had already done

duty at the St. Louis exhibition, so it is not surprising that they show deterioration.—The rubber exhibits at the Southern Nigeria stand comprised Calabar lump niggers and ball, Beniu lump rubber and root rubber, and attention is drawn to the fact that the Forestry department is well organized, 214 plantations having been made last year, containing over 227,000 young rubber trees. Both the *Funtumia* and the *Landolphia* are found all over the protectorate, the exports being chiefly made from the factories on the Niger at Calabar and Siluko. Prominent among rubber trading firms are John Holt & Co., Onitsha, and Alexander Miller, Brothers & Co.—The West Indian and Trinidad stands show an interesting collection of various animals made from Balata on sale at 2s. 6d. each. These, of course, represent native handicraft. I am not aware that Balata has come into competition with rubber in the European rubber toy manufacture.

## LITERATURE OF INDIA-RUBBER.

DAILY CONSULAR REPORTS, NO. 2309. WASHINGTON: JULY 15, 1905. [Including "New Source of Rubber." By Louis H. Ayme, United States consul at Para, Brazil.]—vol. Pp. 15.

MR. CONSUL AYME'S report was reproduced in THE INDIA RUBBER WORLD of August 1 (page 365). The accompanying reports on the rubber producing *Sapium* species discovered lately on the Amazon and referred to in the issue above noted, appear in full in this official publication.

DEUX NOUVELLES PLANTES À CAOUTCHOUC DE MADAGASCAR. Par H. Jumelle. [Extract from the journal *Le Caoutchouc et la Gutta-Percha*. Paris: 1905. (8vo. Pp. 15.)]

RELATES (1) to a tree of the natural order *Euphorbiaceae*, in the Ambongo region, known locally as "pirahazo" and designated by the author *Euphorbia pirahazo*, and (2) to a liane in the south of Menabe, known to the natives as "vahimainty," both being of economic value.

## IN CURRENT PERIODICALS.

ARVORES de Borracha e de Balata da Região Amazonica. By Dr. Jacques Huber, chief of the botanic section of the Pará Museum. [Notes on newly designated species of *Sapium*; also on the species locally known as "Maçaranduba" and "Maparajuba," which are identified with the genus *Mimusops*, to which belongs the Balata yielding trees of Venezuela and the Guianas; see THE INDIA RUBBER WORLD, August 1, 1905—page 365.]—*Boletim do Museu Grãdi (Museu Paraense)*, Pará. IV-2:3 (December, 1904). Pp. 415-437.

Extraction and Preparation of Rubber. [A resume of results from various methods, particularly in relation to *Castilleja elastica*.]—*West Indian Bulletin*, Barbados. V-3 (1904). Pp. 210-223.

Der Guayule und Seine Wirtschaftliche Bedeutung. By Dr. Rudolf Endlich. [A comprehensive report on a Mexican rubber producing plant and its exploitation to date.]—*Der Tropenpflanzer*, Berlin. IX-5 (May, 1905). Pp. 233-247.

Cacao sous Ombre de *Castilloa*. By P. Cibot. [Observations on the hacienda of General Don Raimundo Fonseca, in Venezuela.]—*Journal d'Agriculture Tropicale*, Paris. V-47 (May 31, 1905.) Pp. 141-143.

Ueber Kautschuk- und Guttaperchakultur in Deutschen Kolonien. By Professor Dr. Paul Preuss. [A comprehensive summary of progress in various districts in planting different species, and of results attained to date.]—*Der Tropenpflanzer*, Berlin. IX-6 (June, 1905). Pp. 297-307.

The Future Supply of India-Rubber. By H. L. Terry, F. I. C., A. I. M. M. [A discussion of the outlook for planted rubber, and the effect upon prices.]—*The Electrical Review*, London. LVII-1443 (July 21, 1905). Pp. 122-123.

Einige Bemerkungen über Anlage von Kautschukpflanzungen, mit besonderer Berücksichtigung von Holländisch-Borneo. By C. Boehmer. [With 5 illustrations.]—*Der Tropenpflanzer*, Berlin IX-8 (August, 1905). Pp. 438-450.

MR. J. K. BURBRIDGE.

NAVAL  
FISH-RES  
EXHIBITION.

THE  
COLONIAL  
EXHIBITION

## AIR BRAKE HOSE TESTING APPARATUS.

**I**N view of the expense of the air brake equipment for an extensive railway system and the importance of the quality of the rubber hose involved, the management of the Norfolk and Western railway some time ago secured the designing by its motive power department of a series of devices for thoroughly testing air brake hose, as the result of which the efficiency of the material may now be thoroughly determined before it is placed in service. There are presented herewith two illustrations, Figure 1 showing the device for the bursting test of hose to the right and the apparatus for the buckling test to the left. Another view of the buckling test machine is shown by Figure 2.

The latter machine is designed to reproduce as far as possible the vibration or buckling to which air brake hose is subjected on the road. It is operated by a pulley driven by a belt from a countershaft above. On the shaft of this pulley is a crank for giving motion to a vibrating arm.

The hose is coupled at one end to a stationary nipple and the other end to a blank nipple, fitted into a vibratory arm. The number of vibrations are taken by a stroke counter and a constant air pressure is maintained in the hose by using a reducing valve, and a small diaphragm is introduced in the supply pipe leading from the reducing valve to the hose. This diaphragm contains a very minute hole—about one one-hundredth of an inch in diameter—which reduces the supply to a very small volume. Connecting to this pipe is also a gage which indicates the pressure, making it possible to see at all times that the machine is working in proper condition, and at the same time this gage is equipped with a proper arrangement for completing an electric circuit. When the hand drops to a given point at which time the circuit is completed, the machine shuts off automatically. The leak in the hose is made uniform in all hose tested by this diaphragm above mentioned, which has the effect of causing the pressure hand on the gage to drop to the point where the circuit is completed and the machine cut off when the leak in the hose exceeds the leak in the diaphragm.

In order to save time in placing and removing the hose, unions are so arranged that the hose may be held securely by a lever clamp. A constant pressure of air is maintained in the hose by using a standard Westinghouse signal line reducing valve, and it is found that the best results are ob-

tained by the use of fifteen pounds pressure.

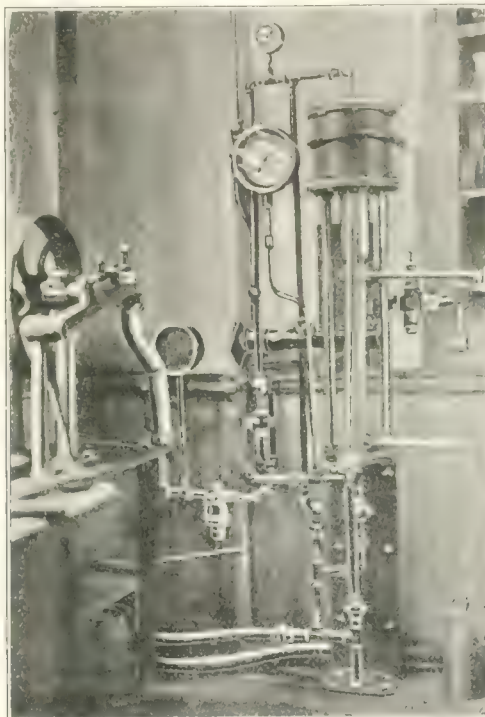
In order to announce a break and consequent leak in the hose, a whistle is attached to the end of the vibrating arm, as shown in the illustrations, and connected to the upper end of the hose. Air is maintained in the hose and kept from leaking through to the whistle by a plain bevel seat valve, which is held closed by pressure of the air. On the opposite side is a spring to unseat the valve, which is set at 12 pounds. When a leak occurs in the hose and the pressure is reduced below 12

pounds, the valve unseats, permitting air to pass to the whistle, announcing the leak. An ordinary cyclometer is arranged on the frame supporting the machine and is operated by the crank engaging the lugs thereon, so that the number of vibrations are counted automatically. The hose is usually given about 120 vibrations per minute, and while no specifications have been prepared in this direction, the hose should stand about 75,000 vibrations, or bucklings, before failing.

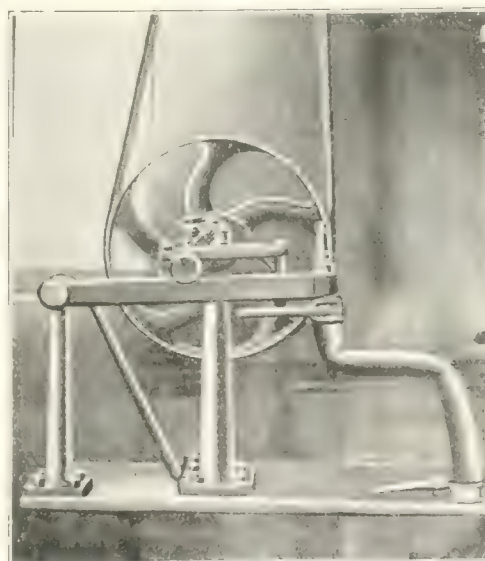
The apparatus for the bursting test consists of a frame for supporting the hose and pipe connections and a differential piston for supplying the necessary pressure. The position of the hose is shown in Figure 1 and the manner in which it is clamped is also indicated. In making the test water is admitted from below to fill the hose and small cylinder. The valve is then closed and air admitted to the top of the upper and larger cylinder, forcing the piston down and supplying a pressure to the hose. The diameter of the smaller piston in this instance is  $2\frac{3}{4}$  inches, and the larger, or air cylinder, is 8 inches in diameter. The Master Car Builders' Association requires that a test hose must stand for 10 minutes a pressure of 500 pounds before bursting.

Besides the appliances here described the Norfolk and Virginia road has simple tests for friction and stretching, as required by the Master Car Builders' Association. Unfortunately there are no testing machines at present that duplicate the weird things that careless train men do to hose to its frequent detriment. Nor are the effects of extremes in heat and cold measured and recorded. But doubtless they will be sometime.

In presenting the description THE INDIA RUBBER WORLD has had the assistance of Mr. W. W. Lemen, the company's engineer of tests, and the illustrations appear through the courtesy of the *Railway Master Mechanic* of Chicago.



HOSE TESTING APPARATUS—FIG. 1

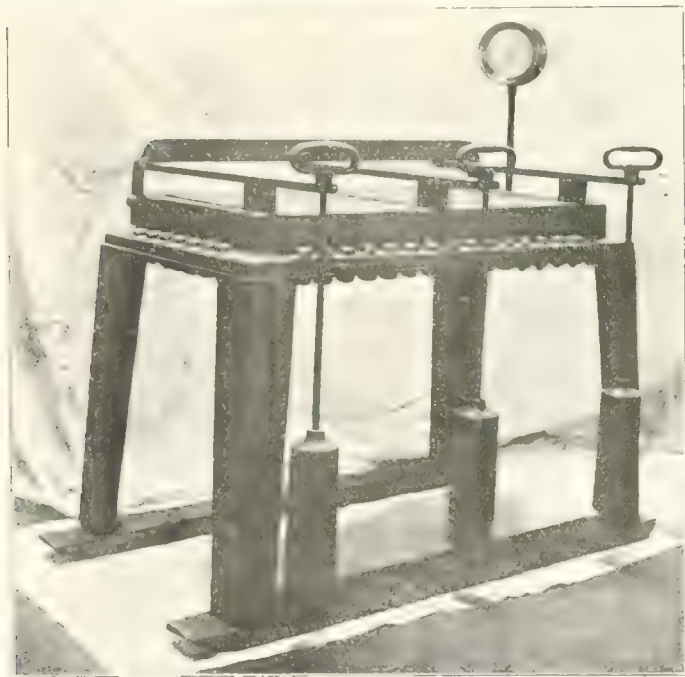


HOSE TESTING APPARATUS—FIG. 2



## ADAMSON'S SELF CONTAINED VULCANIZER.

THE business that centers about the repairing of automobile and bicycle tires is a very large one; indeed, one that is growing as rapidly in proportion as the automobile business itself. It is interesting, therefore, to note the types of vulcanizers that are used in these repair shops. The accompanying illustration, for example, shows one adapted for branch houses and repair shops where steam pressure is not available. In this case the heat is obtained by two special gas burners applied to the bottom of the press, which is of boiler plate, and in which steam is generated. This heats the top plate, which is made of cast iron, and upon this the part of the tire to be vulcanized is placed. The tire is held in position by means of a wrought iron bar and a counterweight. Several tires may be vulcanized at the same time, and if necessary a repair in a mold section can be vulcanized, taking a little longer time for the cure. The press is fitted with a steam gage. If the weights shown in the illustration are not sufficient, others can be slipped upon the standards so that any reasonable pressure may be applied. [Manufactured by A. Adamson, Akron, Ohio.]



ADAMSON'S SELF CONTAINED VULCANIZER.

## NEW HOSE VULCANIZING MOLD.

THE manufacture of garden hose in 500 foot lengths has been a specialty that only two American concerns, to our knowledge, have followed. One of these companies made it by an adaptation of the existing method of ordinary hose manufacture; the other by utilizing certain patented machinery and processes which were the invention of the late Henry B. Cobb. The latter process, in brief, was the running of an inner tube through a tubing machine and braiding round it one or more plies of fabric in continuous lengths, after which a rubber cover was put on by drawing a strip of rubber and the fabric covered tube through a die. The hose was then run through a lead press and a lead casing put on the outside of it. Then the 500 foot length was wound on a drum and vulcanized in an open heater. A subsequent process was the stripping the lead cover off of the hose and cutting it up in bits ready again for the melting pot.

As in many instances the 500 foot length of hose finds an ex-



FIG. 1.

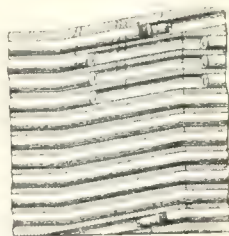


FIG. 3.

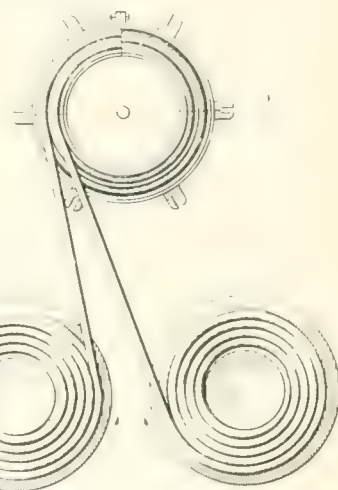


FIG. 2.

cellent market, it is interesting to note that Mr. Henry Z. Cobb, son of the inventor of the process just described, is the patentee of another for the manufacture of hose in extra lengths. His patent, in brief, calls for a sectional mold, the various sections of which, nesting together and held in place by side clamps and bolts, form spiral grooves enclosing two lengths of hose during vulcanization. In the first illustration is shown one of the grooved plates, under and over which the hose is run with an upward slant. The second illustrates the method of feeding two lengths into a section. The third makes plain the position of the hose after it has been coiled in place and the various molding sections built up around it. The fourth is simply a cross section of the whole vulcanizing mold after the separate plates have been nested together and fastened in place by side clamps.

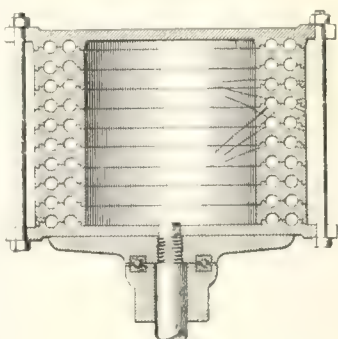


FIG. 4.

One part of the process is an arrangement for forcing water into the hose to keep it under pressure during vulcanization. The idea set forth in the invention is to have a complete vulcanizing mold with clamping plates, the whole to go into a vulcanizer and cure in the ordinary manner. The United States patent is numbered 792,198.

## "JOTTINGS BY AN AMERICAN IN EUROPE."

IN reprinting from our pages some notes of travel by a valued correspondent, the *Gummi Zeitung* (Dresden) remarks:

"THE INDIA RUBBER WORLD publishes a series of articles from the pen of A. M. Stickney, in which the author relates his observations concerning the manufacture of India-rubber goods in Europe, which he made during a trip through the old world. Some of these observations are of considerable interest, especially due to the fact that they represent the judgment of a man who has received his practical education across the Atlantic, and who looks on things soberly and lucidly, without, however, showing the well known American prejudice which nearly always influences transatlantic judgment. We shall not fail, therefore, to make our readers acquainted with a few abstracts from these fluently written notes of travel."

## NEW GOODS AND SPECIALTIES IN RUBBER.

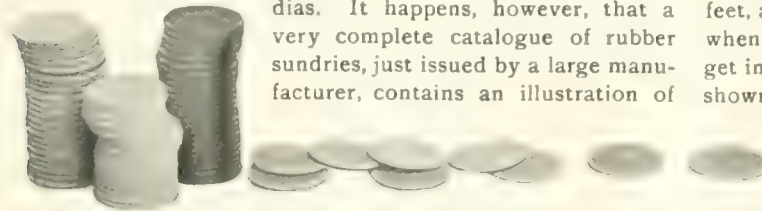
### THE "PENNA" NOSE GUARD.

THIS is a new article, comprising a body portion provided with an opening and a mouthpiece consisting of a central web and heads or enlargements at the ends thereof, the heads bearing upon the opposite sides of the body portion adjacent to the opening therein, and one of the heads being flexible. This nose guard is referred to as being more durable than others in use, on account of having a detachable mouthpiece, capable of being renewed whenever necessary. The chin extension further aids to make it a practical and comfortable guard. Protected by United States patent No. 790,237, issued to Frank A. Wilcox. [Pennsylvania Rubber Co., Jeannette, Pa.]



### RUBBER POKER CHIPS.

FROM time to time inquiries have reached THE INDIA RUBBER WORLD for information where to buy not only every known article made of rubber but also for articles which could hardly have existed except in the minds of the inquirers—all of whom, by the way, are not intimately identified with the rubber trade. Among the things asked for have been "poker chips," an article not described in any of the rubber encyclopedias. It happens, however, that a very complete catalogue of rubber sundries, just issued by a large manufacturer, contains an illustration of



Poker Chips, though without explaining what they are for, and as a matter of interest to the curious we have obtained permission to reproduce the picture here. The catalogue does mention, however, that these articles are made of high grade white, red, and blue rubber stock; boxes packed with 50 white, 25 red, and 25 blue chips; \$20 per thousand. [The B. F. Goodrich Co., Akron, Ohio.]

### ATTRACTIVE TOY ANIMALS.

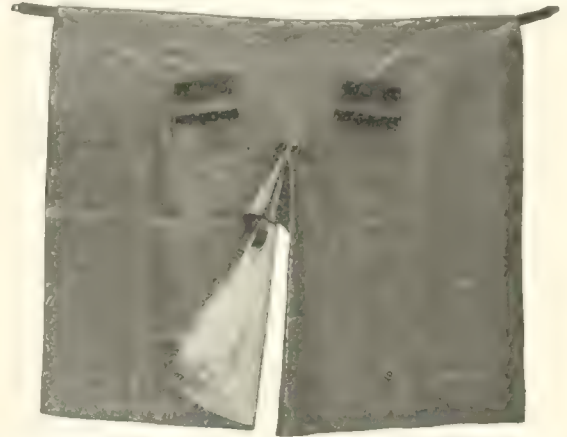
THIS illustration relates to a new red rubber toy—a handsome dog, 9¼ inches long and 5 inches high. By gently squeezing its head the dog can be made to stick out his tongue in a lifelike manner. Besides, the head is on a swivel and can



be turned in any position. The toy is referred to as being strong and well constructed, perfectly modeled, color fast, and it is washable. Each piece has a German silver whistle. There are also made red rubber cats with tongues that protrude. [The Hanover Rubber Co., Limited—George Borgfeldt & Co., agents for the United States, New York.]

### A NEW TROUSER ROBE.

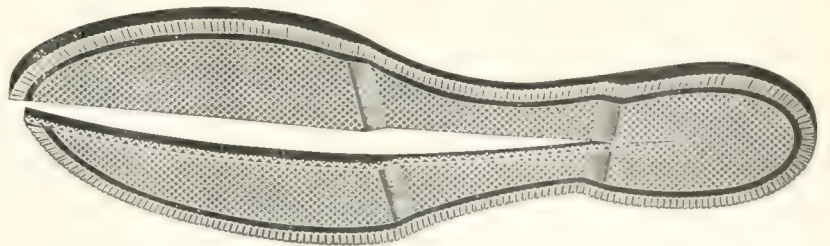
THE trouser robe for motoring shown in the illustration is made to buckle around the waist and ankles. It is designed to combine protection with freedom of motion, besides which it keeps off the wind. As everybody knows, no small part of the work of controlling an automobile in motion is done by the



feet. Many machines having clutches are thrown in by the feet, and in most cases the brakes are worked by the feet, and when the feet are covered the man running a car is liable to get into trouble. It is to obviate this difficulty that the robe shown here has been brought out. In one of the western states, it is asserted, a chauffeur while running a machine is not allowed to wear a robe that will interfere with the free movement of his feet. This robe is made of double fabrics, with rubber between, which renders it wind proof as well as waterproof. [L. C. Chase & Co., Boston and New York.]

### THE INDENTED FIBER SOLE.

THIS cut relates to a rubber tread, as for shoe soles, comprising an elastic body, a wear resisting layer secured thereto and composed of a piece of textile fabric having indentations in the inner side and corresponding projections on its outer side, and an elastic tread layer secured to the outer side of the wear resisting layer, the said projections penetrating the tread layer and forming parts of the tread surface. Each indentation in the surface of this sole not only unites the fiber portion of the sole with the rubber portion, but



also changes the angle of the threads of the fiber so that the tread surface of the sole is made non slipping and non cracking, thus conducing to both strength and flexibility. This construction is known also as the "indented duck face sole." It is the subject of United States patent No. 767,120, issued to Phillip W. Platt. [Foster Rubber Co., Boston.]



## THE "DIME" SCREEN DOOR CHECK.

FOR the prevention of slamming of screen doors, an ingenious little device has been invented which is partially illustrated by the engraving herewith. It consists of a bumper of molded rubber attached by a screw to the door jamb, and a plunger of metal rigidly attached to the screen door.



The door is checked three inches from the closing point, when the rubber bumper hangs in a vertical position. The coming in contact of the rubber bumper and the metal plunger changes the position of the former, as shown in the cut herewith, the effect being

to check the door and thus allow it to close without slamming, after which the rubber bumper resumes its vertical position. A patent has been applied for. The device is intended to retail at 10 cents. [The Caldwell Manufacturing Co., Rochester, New York.]

## MARVIN'S EMERGENCY FIRE HOSE MENDER.

IT often happens that the delay caused by the bursting of hose at a fire results in much loss of property. It has been necessary hitherto that the pressure be cut off and the flow of the water discontinued while the hose was being mended or a new section substituted, it being impracticable to apply an ordinary sleeve

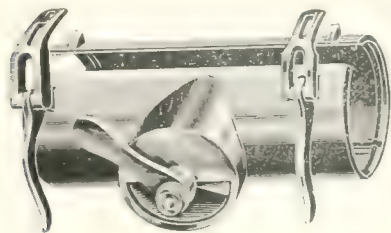


FIG. 1.

to burst hose while the water continues to flow from the leak under fire pressure. The new device described here can be quickly applied to hose at any time, and when under full fire pressure. It consists of a casing adapted to be

clamped to the side of the hose and containing on one side an orifice which may be left open while the hose mender is being applied, thus allowing the free escape of water from the

burst portion of the hose until the mender is securely in place. This orifice is provided with a valve which may be closed after the mender is in position. Figure 1 gives a general view of the clamp; Figure 2 shows it in process of being applied, the valve being left open for the escape of water meanwhile; Figure 3 illustrates the method of finally closing the leak; and Figure 4

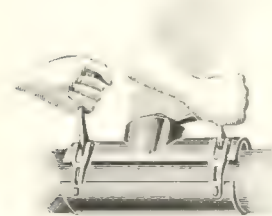


FIG. 2.

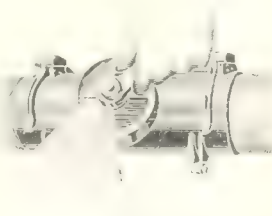


FIG. 3.

the repair complete. The hose in a burst condition is apt to be swelled somewhat, rendering it difficult to bring the hose

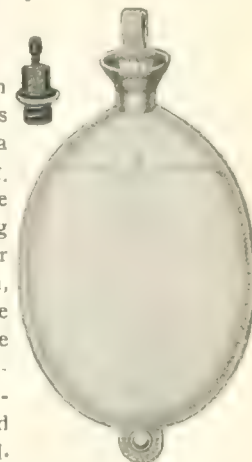


FIG. 4.

mender down into its final position. This is obviated by means of a double link on one end, which has a longer reach, as shown in Figure 2. By means of this feature, the two halves of the hose mender can be brought gradually together, and when it is firmly secured at both ends the valve is closed, as shown in Figure 4, and the repair is complete. This device is the subject of United States patent No. 763,191. It is made of brass, polished to a nozzle finish, and weighs only about 7 pounds. It is understood to have been well received by fire department officials. [J. B. Marvin, Frankfort, Indiana.]

## COMBINATION WATER BOTTLE AND SYRINGE.

THE Combination bag illustrated in the accompanying illustration, as its name implies, may be used either as a water bottle or a fountain syringe bag. The conversion from one use to the other requires only the interchanging of the stopple and the hard rubber syringe connection. As will be seen, the bag has a top outlet, instead of the syringe connection being made at the bottom, as in the case of other combination bags. This article may be obtained in either white or slate colored rubber, and at an extra price, in red. In sizes, it is supplied in 1, 2, 3 and 4 quarts. [The B. F. Goodrich Co., Akron, Ohio.]



## THE LATEST ARTIFICIAL RUBBER.

[A PRESS DISPATCH.]

BENTON HARBOR, MICH., July 16.--Dr. Henry V. Tutton, well known surgeon, and John Smith, a chemist, have discovered a process for manufacturing rubber. Success has been attained after five years of experimenting. It can be manufactured and sold at a profit at 40 cents a pound. Mexican rubber costs \$1.25. A stock company will be organized and the material manufactured in large quantities. The process is kept a secret.

[ANSWER TO AN INQUIRY.]

TO THE EDITOR OF THE INDIA RUBBER WORLD: While Mr. Smith and myself have succeeded in extracting (not making) a peculiar gum from certain of our native herbs, which when properly treated possesses many of the characteristics of rubber, such as elasticity, tensile strength, vulcanizing properties, and so forth, we are in no position to state what commercial value the product may prove to have, it being as yet merely in the experimental stage.

It is amusing to read the comments and wild statements appearing in some of the newspapers concerning this matter. We are simply experimenters and investigators, and have never even contemplated the formation of a stock company to exploit something of the value of which we are ourselves ignorant. Not one cent of anybody's money but our own has been used by us so far, and we are neither of us inclined to join the already too great army of "grafters."

That we have something which will prove to be commercially useful, we firmly believe, though with our exceedingly limited laboratory facilities, it may be one, two, or even three years before we can positively tell for what purpose.



It is unfortunate that merely showing a small piece of our product should have raised such a "tempest in a teapot," as it has undoubtedly done, and it is doubly unfortunate for the reason that it has been the means of handicapping us in our experiments and bringing us into disrepute unjustly.

Yours in a spirit of true investigation, H. V. TUTTON.  
Benton Harbor, Michigan, August 1, 1905.

## RECENT RUBBER PATENTS.

## UNITED STATES OF AMERICA.



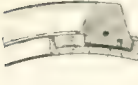
ISSUED JUNE 27, 1905.

- N**O. 793,103. Hose-pipe coupling. J. Schlotz, San Francisco.  
 793,179. Vehicle tire. W. W. Clark, Buffalo, N. Y.  
 793,203. Shut-off fire hose nozzle. M. D. Larkin, Dayton, Ohio.  
 793,209. Hose coupling nut. W. C. C. Miller, Vacaville, Calif.  
 793,405. Pneumatic tire. E. C. Teuscher, St. Louis.  
 793,441. Tire. [Pneumatic, detachable, leather.] R. Healy, Brooklyn, N. Y.  
 793,490. Hose connection for cars. H. A. Wise, Mammoth, W. Va.  
 793,508. Elastic tire for vehicles. A. T. Collier, St. Albans, England, assignor to The Reilloc Tyre Co., Ltd., London.  
 793,518. Fountain pen. J. Fox, Beckley, W. Va.  
 793,598. Fountain pen. J. G. Marshall, Brooklyn, assignor of one-half to G. A. Clark and W. A. Zeidler, New York city.  
 793,618. Anti skidding attachment for pneumatic tires. W. J. Smith, Canastota, N. Y.

## Trade Marks.

- 1,558. Pneumatic tires. Continental Caoutchouc Co., New York city. *Essential feature.*—The duplicate representations of a prancing horse at the center of concentric circles, between which appear the letters, abbreviation, and character C C. & G CO. H. and between these duplicate representations the words CONTINENTAL PNEUMATIC.  
 2,825. Pencil and cleaning composition erasers. F. A. Weeks, New York city. *Essential feature.*—The word ERASIT.  
 3,157. Elastic arm bands. The Blakesley Novelty Co., Bristol, Conn. *Essential feature.*—The word EASY.  
 5,131. Insulated electrical conductors and asbestos electrical conductors. D. & W. Fuse Co., Providence, R. I. *Essential feature.*—The word DELTABESTON.

ISSUED JULY 4, 1905.

- 793,657. Pneumatic brush. L. W. Hardy, assignor of one-half to H. W. Stillman, both of Chicago.  
 793,682. Rubber dam holder. [See THE INDIA RUBBER WORLD, March 1, 1905—page 197.] J. J. Rojo, Mexico City, assignor to The S. S. White Dental Mfg. Co., Philadelphia.  
 793,711. Pneumatic tire. J. K. Broderick, St. Louis.  
 793,756. Pneumatic arm rest for bookkeepers or writers. W. W. Williams, Appleton, Wis.  
 793,869. Hose coupling. A. H. Anderson, assignor of one-third each to E. Franklin and C. Powell and one-sixth to J. E. Lane, all of Kellogg, Idaho.  
 793,937. Inflation valve [for tires and the like]. J. E. Keller, Jr., Litchfield, Conn.  
 793,960. Combined washbowl and water receptacle. [See THE INDIA RUBBER WORLD, February 1, 1905—page 160.] S. J. Rosenfeld, Springfield, Mass.  
 793,998. Tire for vehicle wheels. G. B. Dryden, Chicago.  
 794,004. Horseshoe. J. H. Gay, assignor of one-fourth to M. D. Byrne and F. E. McGovern, all of Milwaukee, Wis.  
 794,026. Foot bath. J. Kerstetter, Bradford, Pa., assignor to Thermal Foot Bath Co.  
 794,031. Tire gage. J. E. Lehman, Revelstoke, Canada.  
 794,033. Atomizer. E. E. Menges, New Haven, Conn., assignor to The Seamless Rubber Co.  
 794,061. Elastic mouthpiece [for smoking pipes]. E. Vuillard, St. Claude, France, and M. Strauss, London, England.  
 794,082. Valve cap [for pneumatic tire valves]. J. V. Crone, Greeley, Colo.  
 794,096. Syringe. Ella M. Gray, Des Moines, Iowa.  
 794,115. Combined hose-rack and valve. F. R. Porter, East Stroudsburg, assignor of one-half to W. A. Gilbert, Stroudsburg, Pa.

- 794,143. Vehicle wheel [with elastic tire]. J. F. DeJarnette, assignor to Eby Mfg. Co., both of Omaha, Nebr.  
 794,147. Artificial leg [involving layers of rubber.] J. K. S. Farris, Saltville, Va.

## Trade Marks.

492. Compound for waterproofing and weatherproofing cotton duck. W. B. Robeson, Port Huron, Mich. *Essential feature.*—The word PRESERVO.  
 1329. Rubber horseshoes. The Whitman & Barnes Mfg. Co., Akron, Ohio. *Essential feature.*—A diamond shaped figure, with the initial letters and character W. & B. inclosed.  
 2223. Elastic or cushion heels and soles for boots and shoes. Frank W. Whitchee, Boston. *Essential feature.*—The word CINCH.  
 2224. Elastic or cushion heels and soles for boots and shoes. *Same.* *Essential feature.*—The word WAUKON.  
 2400. Hydraulic hose. Eureka Fire Hose Co., Jersey City, N. J. *Essential feature.*—The word EUREKA.  
 2403. Fabric hose. *Same.* *Essential feature.* The word SURPRISE.  
 2406. Fabric hose. *Same.* *Essential feature.*—The word TRADE.  
 2407. Fabric hose. *Same.* *Essential feature.*—The word PREMIER.  
 2409. Fabric hose. *Same.* *Essential feature.*—The representation of an eagle with outstretched wings perched upon a hydrant.  
 2410. Fabric hose. *Same.* *Essential feature.*—The word EAGLE.  
 2412. Fabric hose. *Same.* *Essential feature.*—The word TROJAN.  
 2413. Fabric hose. *Same.* *Essential feature.*—The word TRUMPET.  
 2414. Fabric hose. *Same.* *Essential feature.*—The letters U S. placed within a circle.  
 3028. Heat storing devices or articles containing salts which melt in their own water of crystallization and having a latent heat of fusion for imparting heat on recrystallization of the salts. The Thermalite Co., New York city. *Essential feature.*—The word THERMALITE.  
 6639. Fountain pens. C. E. Browning, Toledo, Ohio. *Essential feature.*—The words RAPID WRITER.

ISSUED JULY 11, 1905.

- 794,197. Pneumatic tire. W. F. Stearns, Batavia, N. Y.  
 794,230. Elastic tired wheel. E. Keup, assignor of one half to R. G. Chisholm, both of San Francisco.  
 794,372. Pneumatic tire. D. J. May, Detroit, Mich.  
 794,381. Conveyor belt. T. Robins, Jr., assignor to Robins Conveying Belt Co., both of New York city.  
 794,387. Vaporizer. E. W. Ballentine, Chicago, assignor to Chicago Vaporizer Co.  
 794,399. Hose reel bracket. G. Erxleben, New York city.  
 794,424. Air-tight door sill. C. J. Petit, McKeesport, Pa., assignor to Follansbee Brothers Co., Pittsburgh.  
 794,473. Machine for manufacturing pneumatic wheel tires. A. E. Vincent, Noisy-le-Sec, France.  
 794,528. Wheel [with pneumatic tire]. J. W. Meixell, Lewisburg, Pa.  
 794,539. Hose coupling. J. D. O'Brien, Mullan, assignor of one half to J. J. Murphy and M. J. Maher, Burke, Idaho.

## Trade Marks.

1259. Belting for power transmission. The Gandy Belting Co., Baltimore, Md. *Essential feature.*—The representation of a coil of belting with a bale of cotton laid across it and the words GANDY'S BELTING printed on the coil of belting.  
 1260. Belting for power transmission. *Same.* *Essential feature.*—A rectangular figure covered with dotted lines and having the words THE GANDY BELT printed thereon.  
 1527. Flexible insulating tubing to inclose electric wires. American Circular Loom Co., Chelsea, Mass. *Essential feature.*—The representation of a cut length of woven tubing coiled into the form of a ring, with the ends interlaced and projecting beyond the ring at each side thereof, associated with the words FLEXIBLE CONDUIT.  
 2225. Rubber heels and soles for boots and shoes. F. W. Whitchee, Boston. *Essential feature.*—The word VELVET.  
 2399. Hydraulic hose. Eureka Fire Hose Co., Jersey City, N. J. *Essential feature.*—The word PARAGON.  
 2402. Fabric hose. *Same.* *Essential feature.*—The word MONITOR.  
 2518. Hose nozzles, bath sprays and jets, overhead showers, and hose sprinklers. W. Boekel & Co., Philadelphia. *Essential feature.*—The letter B inclosed in a circle.  
 3134. Elastic or cushion heels and soles for boots and shoes. F. W. Whitchee, Boston, Mass. *Essential feature.*—The word NOJAR.



3366. Waterproof cloth. Fulton Bag and Cotton Mills, Atlanta, Ga. *Essential feature.*—The word SHUREDRY.
3647. Fountain pen. Eagle Pencil Co., New York city. *Essential feature.*—The word EAGLE and the representation of an eagle with outstretched wings holding a pencil in its beak and pens in its talons, and a sunburst behind the eagle.
3648. Rubber erasers. *Same. Essential feature.*—The word EAGLE and the representation of an eagle standing on a base with outstretched wings.
3673. Piston packing. American Steam Packing Co., Boston. *Essential feature.*—The hyphenated word ASBESTOS-METALLIC, inclosed in a pictorial representation of the packing arranged in the form of a horseshoe.
4426. Rubber tires and pneumatic tires. Mineralized Rubber Co., New York city. *Essential feature.*—The representation of an anchor inclosed in a diamond shaped figure.
5922. Electric conductors covered with India-rubber. The Okonite Co., Ltd., New York city. *Essential feature.*—The representation of a ridge of insulating material on the exterior surface of an insulated wire and extending in a line substantially parallel with the major axis.

[NOTE.—Printed copies of specifications of United States patents may be obtained from THE INDIA RUBBER WORLD office at 10 cents each, postpaid.]

### GREAT BRITAIN AND IRELAND.

#### PATENT SPECIFICATIONS PUBLISHED.

The number given is that assigned to the Patent at the filing of the Application, which in the case of those listed below was in 1904.

\* Denotes Patents for American Inventions.

[ABSTRACTED IN THE OFFICIAL JOURNAL, JULY 5, 1905.]

- 5878 (1904). Ventilating hoof pad for horses. J. B. Brooks, Finsall, near Broomsgrove.
- 5891 (1904). Means for inflating pneumatic tires by the motion of the wheel. A. H. Edwards, Stoke Newington, London.
- 5927 (1904). Wheel fitted with twin tires of solid rubber. A. E. Crowdy, Birmingham.
- 5966 (1904). Tire and rim constructed in segments for the purpose of facilitating repairs. C. W. Hayward, Liverpool.
- \* 6026 (1904). Clamp for connecting hose pipes to nozzle. V. H. Davison, Park City, Utah.
- 6137 (1904). Pneumatic tire with anti skidding device. W. D. Sainsbury, J. R. Nesbit, and Sainsbury's Anti-Skidders, Ltd., London.
- 6172 (1904). Golf ball with core weighted by mercury or amalgam. W. H. and H. Southon, London.
- 6270 (1904). Pneumatic tire prevented from slipping by means of leather or metal discs. A. F. M. Howell, Ramsgate, Kent.
- 6329 (1904). Pneumatic tire with armored tread to prevent wear. Société C. Durand et Cie., Paris, France.
- [ABSTRACTED IN THE OFFICIAL JOURNAL, JULY 12, 1905.]
- 6471 (1904). Solvent for India-rubber. Robinson Brothers and G. A. L. Clift, West Bromwich, Staffordshire.
- 6509 (1904). Pneumatic tire with multiple air tube. M. C. Bickmore, Oxford.
- 6519 (1904). Pneumatic tire protected by being enclosed within a channeled rim having a solid rubber tread. A. C. Birkin, Hanwell, Middlesex.
- 6538 (1904). Pneumatic tire with double air tube. J. R. Taylor, Wandsworth common, Surrey.
- 6549 (1904). Pneumatic tire with puncture preventing cover. J. F. de Savignac, Marseille, France.
- \* 6947 (1904). Covered elastic cord suitable for use in suspenders and the like. J. and F. N. Ashworth, Somerville, Massachusetts.
- 6980 (1904). Pneumatic tire with puncture preventing and non slipping device. G. H. Alexander and E. G. Warland, Birmingham.
- 9991 (1904). Stopper for hot water bottles. J. B. Brooks and J. Holt, Birmingham.
- [ABSTRACTED IN THE OFFICIAL JOURNAL, JULY 12, 1905.]
- 7161 (1904). Pneumatic tire protected by rings of flexible wire cable. G. Pilkington, Rex Motor Works, Coventry.
- \* 7205 (1904). Elastic tire. [Described in THE INDIA RUBBER WORLD June 1, 1905—page 306.] C. Motz, Akron, Ohio.
- \* 7235 (1904). Non slipping sole for boots. J. R. van Winkle, Sumpter, Oregon.
- 7240 (1904). Pneumatic tire. H. A. Hadven, London. (B. Polack, Waltershausen, Germany.)
- 7357 (1904). Elastic tire with tread studded to prevent slipping. E. C. F. Otto, London.
- 7399 (1904). Horseshoe pad. A. E. Hibbitt, H. Lewis, and F. Turner, all in Northamptonshire.

### THE GERMAN EMPIRE.

#### PATENTS GRANTED.

- 162,264 (Class 63e). Fastening device for motor tire covers. K. Lehman, Wilmersdorf.
- 162,383 (Cl. 63e). Tire inner tube. F. Veith, Odenwald. June 21.
- 162,420 (Cl. 33e). Hair comb. Hannoversche Gummi-Kamm Co., Limmer. June 28.
- 162,552 (Cl. 63e). Pneumatic tire with elastic cushion. H. Lutz, Hamiltion, United States. June 28.
- 162,690 (Cl. 63e). Tire protector. C. A. Brackelsberg, Düsseldorf. July 5.
- 162,813 (Cl. 63e). Elastic tire, protected from puncture by self closing cover. P. G. Nadig, Paris. July 12.
- 163,151 (Cl. 39a). Device for inflating rubber balloons and toys with compressed air. L. Fortuna, Ginnheim. July 19.
- 163,015 (Cl. 63e). Solid rubber tire. J. A. Swinehart, Akron, United States. July 19.
- 163,016 (Cl. 63e). Elastic tire. C. H. J. Chetwynd Talbot, Earl of Shrewsbury and Talbot, London. July 19.
- 163,017 (Cl. 63e). Tire fastening device. Michelin & Co., Clermont-Ferrand, France. July 19.
- 163,018 (Cl. 63e). Tire fastening device. C. André Vert, Vitry. July 19.
- 163,019 (Cl. 63e). Elastic tire. C. Michler, Cologne. July 19.
- 163,075 (Cl. 63e). Pneumatic tire protector. E. Lapisse, Elbeuf. July 19.
- 163,120 (Cl. 65a). Inflatable life belt. A. Gareis, Vienna. July 19.

#### DESIGN PATENTS GRANTED [GEBRAUCHSMUSTER]

- 253,311 (Class 63d). Inflatable handles for cycles and guiding rods of motor cars. J. Boller, Strassburg. June 21.
- 253,528 (Cl. 63e). Tire inflater. G. Hagendorf, Trebin. June 28.
- 253,530 (Cl. 63e). Tire inflater. *Same.* June 28.
- 253,652 (Cl. 15a). Rubber reglet for printers. Oscar Schwinger, Ruhlen. June 28.
- 253,892 (Cl. 63e). Cushion tire. O. Fischer, Dresden. June 28.
- 253,906 (Cl. 63e). Detachable leather tire with inside retaining wire. O. Krieger, Dresden. June 28.
- 254,167 (Cl. 3a). Adjustable extra flap for button holes of rubber collars. F. J. Hess, Worms. July 5.
- 254,187 (Cl. 3b). Waterproof bathing cap. J. Henel, Breslau. July 5.
- 254,356 (Cl. 42b). Rubber band, graduated for measurement. P. Reich, Harburg. July 5.
- 253,071 (Cl. 63e). Leather cover for pneumatic tires. G. Müller, Brunswick. July 5.
- 253,072 (Cl. 63e). Leather cover for pneumatic tires. *Same.* July 5.
- 253,342 (Cl. 63e). Leather cover for pneumatic tires. A. Bewig, Brunswick. July 5.
- 254,322 (Cl. 64a). Stopper with rubber tightening ring. C. Spannagel, Berlin. July 5.
- 254,636 (Cl. 9). Rubber toothbrush. W. Habfast, Göppingen. July 12.
- 255,220 (Cl. 3b). Cravat with elastic lining. G. Duchatsch, Breslau. July 19.
- 254,738 (Cl. 77a). Pneumatic sole and heel protector. W. Lütke mann, Hanover. July 19.
- 255,706 (Cl. 47f). Rubber tightening ring. Oppen and Prinz, Spandau. July 26.
- 255,571 (Cl. 3b). Seamless rubber goods. Akt. Ges. Metzeler & Co., Munich. July 26.

#### PATENTS APPLIED FOR.

- 19,781 (Cl. 63e). Elastic tire with metal tread protector. I. P. Legrand, Levallois-Perret, France. May 24.
- 37,210 (Cl. 30d). Device for producing circulation of hot water in a water bag. Dr. M. Bauer, Vienna. May 31.
- 20,828 (Cl. 63e). Elastic tire. L. Gruss, Linz. May 24.
- 37,269 (Cl. 30g). Nipple for nursing bottle. M. and S. Berliner, Strassburg. May 31.
- 13,237 (Cl. 63e). Tire with retaining wires. T. I. R. Clarkson and G. Welch, Birmingham, England. May 31.
- 6,328 (Cl. 63e). Tire valve. C. Nielsen, Copenhagen. May 31.
- 36,307 (Cl. 71a). Changeable heels for boots. E. J. Bliss, Boston, United States. May 31.
- 17,827 (Cl. 63d). Elastic tire. A. S. F. Robinson, Barsham, England. June 7.

- 10,809 (Cl. 63e). Elastic tire. Dr. Alexander and Posnansky, Berlin. June 7.
- 33,520 (Cl. 63e). Elastic tire. J. E. Hopkinson, West Drayton, England. June 7.
- 24,155 (Cl. 39a). Method of covering golf balls. P. M. Martin, Birmingham, England. June 7.
- 13,193 (Cl. 63e). Inflator for bicycle tires. I. S. Christensen, Aalborg. June 7.
- 18,481 (Cl. 30b). Vulcanite device for dental purposes. J. F. Funck, Rochester, United States. June 21.
- 7,476 (Cl. 63e). Elastic tire. P. G. Radig, Paris. June 21.
- 5,785 (Cl. 63e). Contrivance for making pneumatic tire covers. T. Veith, Weitwerk, Odenwald. May 31.
- 26,194 (Class 13f). Siphon with rubber suction ball. A. Kahler, Hamburg. June 21.
- 18,481 (Cl. 30b). Dental vulcanizer. J. F. Funck, Rochester, United States. June 21.
- 7,476 (Cl. 63e). Elastic tire filled with fluid. P. G. Nadig, Paris. June 21.
- 20,593 (Cl. 63e). Tire fastening device. G. Szam, Budapest. June 28.
- 5,623 (Cl. 39a). Device for smoothing vulcanite bottle stoppers. Vereinigte Berlin-Frankfurter Gummiwaren Fabriken, Gelnhausen. July 5.
- 38,757 (Cl. 63e). Pneumatic tire protector. P. Boursier and E. Deléamont, Paris. July 5.
- 14,313 (Cl. 63e). Leather tire protector. G. Desclée, Jemeppe. July 5.
- 10,061 (Cl. 63e). Device for securing rubber tires to rims by means of lateral coils of wire. J. H. Toole, Chicago. July 5.
- 17,732 (Cl. 39b). Process for renewing rubber. Dr. P. Alexander and Dr. F. Frank, Berlin. July 12.
- 27,963 (Cl. 63e). Process for making tire covers. R. Kirchhoff, Heidelberg. July 12.
- 24,546 (Cl. 39b). Process for obtaining Gutta-percha. Dr. F. Frank and Dr. E. Markwald, Berlin. July 19.
- 38,641 (Cl. 63e). Anti skidding device. L. Burckhardt, Stuttgart. July 19.
- 24,329 (Cl. 3b). Elastic linings for ladies' cloaks. F. Mahler, Duisburg. July 19.
- 19,577 (Cl. 63d). Wheel with compressible elastic rim. M. Gerisch, Reichenbach. July 19.
- 20,714 (Cl. 63e). Pneumatic tire with cork cover. P. L. Desprez, Lyons. July 19.
- 19,620 (Cl. 64a). Metal stopper with rubber ring. German Bottle Seal Co., Hamburg. July 26.
- 10,679 (Cl. 33c). Hair comb. American Hard Rubber Co., New York. July 26.
- 19,231 (Cl. 63d). Elastic tire. W. R. Fasey, Snaresbrook, England. July 26.

### THE FRENCH REPUBLIC.

#### PATENTS ISSUED (WITH DATES OF APPLICATION).

- 350,831 (Jan. 18 1905). E. C. Mallet. Pneumatic tire.
- 350,869 (Jan. 19). A. Keller Dorian. Pneumatic tire.
- 350,878 (Jan. 19). A. H. Devenor. Pneumatic tire with double air chamber, including a novel arrangement of felloe and tire.
- 350,914 (Jan. 21). F. Reddaway. Improvements in the covering pneumatic tires.
- 351,021 (Jan. 21). Firm of François, Grelon & Cie. Pneumatic tires.
- 351,063 (Jan. 27). R. Healy. Pneumatic tire.
- 351,102 (Jan. 28). A. Beaud. Anti skidding and puncture proof protector for pneumatic tires.
- 351,115 (Jan. 30). P. H. de Saint Senoch. Pneumatic suspension device for vehicles.
- 351,152 (Jan. 30). Wilkinson, Gubbins & Quin. Device for cutting out and separating the different materials of which waste rubber consists.
- 351,313 (Feb. 7). L. Brun. Woven material for pneumatic tires.
- 351,437 (Feb. 11). W. C. Stokes. Pneumatic device, especially adapted for automobile pneumatic tires.
- 351,456 (Feb. 13). C. C. Gouin. Elastic compound for tires.
- 351,569 (Feb. 16). L. Saussure. Improved nipple with valve.

[NOTE.—Printed copies of specifications of French patents may be obtained from R. Bobet, Ingenieur-Counsel, 16 avenue de Villiers, Paris, at 5 cents each post paid.]

### NEW TRADE PUBLICATIONS.

**A**ITON MACHINE CO. (New York), extensive manufacturers of machinery, have entered actively upon the manufacture of machinery for the India-rubber, Gutta-percha, and allied industries, including cable making machinery in great variety—stranding, armoring, and serving machines; paper, silk, and cotton covering machines; taping machines, and so on. Their output includes also a drier and vulcanizer for cable manufacture, and vacuum driers for rubber and other products. Typical machines in these branches are described in a series of illustrated "Bulletins," a collection of which may be obtained on application by any one interested. [6¼" × 9".]

THE CANADIAN RUBBER CO. OF MONTREAL, LIMITED, devote their catalogue "F" to a description of the varied and extensive line of Packings of their manufacture. The catalogue is attractive in appearance and its contents interesting. [5½" × 8". 58 pages.]—Another of their recent catalogues is devoted to Interlocking Rubber Tiling, of which they control the manufacture in the Dominion. It embraces a number of designs in color, and also views of interiors in public and private buildings, also in color, showing the tasteful harmonizing of the rubber tints with any scheme of decoration. [9½" × 6". 52 pages.]

THE MITZEL RUBBER CO. (Carrolton, Ohio) issue their Catalogue No. 1 of Drug Sundries, Molded, Seamed, and Dipped Goods, in which are illustrated a number of staple products, and also some articles not embraced in any other catalogue, the whole being a most creditable first essay in the shape of a catalogue in this branch of the trade. [6" × 9". 28 pages.]

THE POPE MANUFACTURING CO. issue a series of catalogues of their bicycles, made under ten different brands, each of which—"Columbia," "Monarch," and so on—was formerly identified with a separate manufacturing company before their amalgamation, together with a number of other concerns, into the American Bicycle Co., which in turn has been succeeded by the Pope company. The number of factories now operated is not indicated by these booklets, but the selling arrangements of the company are confined to Hartford, for some of the brands, and to Chicago for the others. A dozen years ago a prominent amount of space was allotted in the typical bicycle catalogue to the subject of tires, each manufacturer extolling some particular tire. In most of the catalogues issued by the Pope company this year the subject of tires fills only one or two lines—just enough to indicate to the buyer of a wheel that he may have his option of single tube or detachable tires at the same cost. The descriptive pages are devoted rather to details of material, workmanship, and finish involved in the different wheels, as if the bicycle tire had become a standard commercial commodity and that cyclists were no longer interested in discussions of tire merits. Or it might be held to speak well for the rubber manufacturers that cyclists feel sure of getting their money's worth, no matter whose tire they buy. The fact that buyers in every case are offered their choice of single tube or detachable tires is evidence that the single tube is no longer so predominant in the cycling world as at one time—a fact which may be due in part to the striking proof of the merit of the detachable tire afforded in late years in motoring. The Pope company also issue a separate catalogue devoted to motor cycles and another to a special make of wheels for juvenile riders.

#### ALSO RECEIVED.

DAVOL Rubber Co., Providence, Rhode Island—(a) Davol's Whirlpool Spray, No. 212. 4 pages. (b) Household "Handy" Line of Rotary Spray Syringes. 4 pages.



## THE NEW REVOLUTION IN RUBBER.

OUR able contemporary, the Salt Lake City (Utah) *News*, is again turning its attention to rubber. In its issue of July 22 we read:

A local rubber stamp company has just finished turning out a rubber ball and blanket from crude rubber received in this city from Mexico.

From the above lines we are prepared to believe that strange things are happening, and the narrative continues:

The strange thing about the rubber is that it comes not from the far famed rubber tree but from a brush, relative of it, and is apparently as valuable commercially as the product of the latter tree.

These unexpected developments in rubber never fail to revolutionize the business, and we are not surprised to hear that—

The brush exists extensively in the south country, and promises to revolutionize the methods and commercial prices of rubber.

The responsibility for the new revolution, we are pleased to note, has been placed, for the *News* says:

John Beck of Salt Lake City, is head of a concern which intends to pioneer the way into rubber manufacture from the product of the brush.

These things are always done quickly; the world is too impatient to wait long for great impending developments:

To the "News" today he stated that within a month he will leave for Mexico to build a factory.

The location of the new enterprise is definitely set forth in the following informing phrase:

It will be located in the heart of a brush district, and contracts have already been made for the delivery of several tons of the brush per day.

It is gratifying to know that Mr. Beck does not talk rubber without having the proofs about him, as witness:

He had with him when interviewed the rubber ball turned out locally, and a piece of blanket rubber which seemed to be of excellent quality.

Of course there are millions in it:

The company organized to handle the industry is to be known as the "John Beck Syndicate," and will be heavily capitalized.

And Mr. Beck does not intend to stay up in the air, for the *News* asserts:

Mr. Beck will remain on the ground during the erection of the factory.

Of course the revolutionist is free to work when and where he will; it is not in the nature of his business to be limited by rules and regulations. But might not Mr. Beck accomplish more by not spreading himself out over so much territory? The Salt Lake *Tribune* of May 15, 1904, announced that "John Beck, the pioneer of the rubber industry in the West, has returned from Denver, where he had completed the organization of a company for developing and manufacturing rubber in Utah and Colorado." That company had been incorporated as the Continental Crude Rubber and Exploiting Co., with \$1,000,000 capital, to do business primarily at Salida, Colorado, but ultimately all over the Rocky Mountain region, Mr. Beck

being vice president and general manager. The *Tribune* then stated:

Mr. Beck has something more than the incorporation of a company to show. When he made the announcement, he pulled out of his pocket a ball of crude rubber that had been extracted from plants grown by way of experiment, some sheet rubber that had been manufactured and a rubber stamp made from rubber that had been grown in their hothouse at Salida, Colo.

"Yes, it is a pretty good thing that we are starting," said Mr. Beck, in answer to a question. "In fact it is rather bigger than I care to tell you just now. We have been offered 80 cents per pound for the crude rubber that we have produced, and the cost to us is only about 15 cents a pound."

Can it be that Mr. Beck's decision to revolutionize the rubber interest from Mexico is admission that the Rocky Mountain "rabbit weed" lacks rubber? Or has Mr. William Sutherland, of Utah, successfully contested Mr. Beck's claim to be "the pioneer of the rubber industry in the West?"

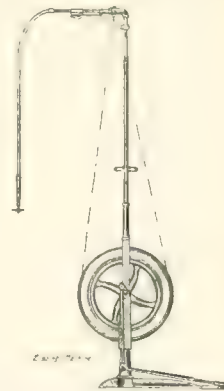
## AN ERASING MACHINE.

BY GEORGE S. HENSENDRICH \*

IN a drafting room where certain records have to be kept, such as street records, plat books, insurance books, main records, etc., and where these records continuously change on account of new pipes being laid in place of the old ones, there will undoubtedly be a great deal of erasing done.

To eliminate the large amount of time and work necessitated in erasing by hand and to do this work carefully a scheme was devised to do this erasing mechanically. The scheme is as follows:

An ordinary dental engine or machine that is used by dentists for drilling teeth was procured and a circular ink eraser set in the mandrel by means of a small screw instead of the regular drill used by the dentist. Everybody is familiar enough with the working of a dental engine without going into a general description of the same. Foot power is used, as is now mostly used by dentists, but a small electric motor could be easily attached to drive the machine without much cost. The flexible shaft to which the eraser and handle are attached allows considerable movement and all the draftsman has to do is to guide the eraser by means of the handle.



Anyone trying this machine will have to watch the following points:

Keep the machine at a good speed and do not press the eraser too hard on to the paper, as the machine erases very rapidly. It will be found that a good paper will take on a hard surface at the erased place and that the erasing will hardly be noticeable.

Erasing can be done by the machine in about one-tenth of the time it would take to do it by hand; besides it is not tiring to the draftsman. It will be found that the draftsman becomes very expert with it, and can erase very fast and when coming to a fine cross line can neatly jump this line without touching it, at the same time erasing completely the line he is working on.

\* From *Progressive Age* (New York).

A POET BUYS RUBBER.—Helge Lund the celebrated poet of East Norway has commenced buying rubber again.—*Thornton (Iowa) Enterprise*.

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# NEW YORK BELTING *and* PACKING CO., Ltd.

Manufacturers of the highest grades of

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Manufacturers of all kinds of rubber goods for mechanical uses—Hose, Belting, Packing, Gaskets, Bicycle Tires, Specialties, Moulded Goods, Etc., Etc.

If you are unable to satisfy your trade with goods you are supplying,  
If you are in search of good goods at fair prices,  
If you cannot get quick deliveries,  
If you are not getting fair value for your money,  
IN ANY EVENT,

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## THE RUBBER PLANTING INTEREST.

## AMERICAN CAPITAL IN STRAITS RUBBER.

A RECENT issue of the Singapore *Free Press* contains fuller details than had previously been made public in regard to the change of ownership of the largest rubber plantation in existence that has been developed to a productive stage. This is located in Malacca, a territory in the British colony of the Straits Settlements in the Malay peninsula, within a few miles of the city of Malacca. It had its beginnings in a small plantation made in 1896 by Tan Chay Yan, a wealthy Chinese citizen of that state, and which gave such promise from the first that he was strongly encouraged by English planters to extend the enterprise. This he did until what is known as the Bukit Asahan estate, of 3800 acres, existed. According to the *Free Press* there are at present 3000 acres fully planted to rubber, 200 trees to the acre, and 500 trees are now producing rubber. In two years' time a total of 2000 acres will be ready for tapping, and in three and one half years the whole will be tapable.

Bukit Asahan estate, before the transfer, was owned by the Malacca Rubber and Tapioca Co., with 12 shareholders, Tan Chay Yan owning more than half the shares. The other holders are Chinese relatives or intimate friends of the chief owner, with the exception of one solitary European.

THE INDIA RUBBER WORLD of May 1, 1905 (page 275) mentions the presence in Ceylon of Mr. F. F. McClintock, of the United States, representing a Boston rubber house, who was reported to be studying the rubber planting situation. It appears that his work resulted in an option being taken on Bukit Asahan, the option holders being connected with a London financial house of the first standing and with Messrs. Alden, Symington & Co., rubber merchants of London, Boston, and New York. The option holders arrived in London on June 6, when plans at once began to be put in execution for the requisition of the property, and by July 5 details had been agreed upon, including the completion of a new transaction, the securing of an additional 6000 acres of virgin land, near Bukit Asahan, in Negri Sembilan, one of the Federated Malay States.

The result is the formation of the Malacca Rubber Plantations, Limited, with a capital of £400,000 [= \$1,946,600], of which £100,000 will be paid in cash to the Malacca Rubber and Tapioca Co., who are to receive also £133,333 in ordinary shares. It is proposed to subscribe £100,000 in cash as working capital, for the development of the new 6000 acres just secured in Negri Sembilan.

The *Free Press* says that while these may seem large figures, they are in reality small in comparison of the assured prospect-

ive value of the estate. It is recognized that 200 Pará rubber trees to the acre should give a yearly profit per acre of \$300 (silver) at 4s. per pound (now 6s. 3d.). This shows an annual profit in 3½ years time of £120,000, and the new 6000 acres will also be in course of development. At the same rate the profit on the whole estate in 8 years should reach £500,000.

Mr. McClintock was accompanied to London by Low Gek Seng, the chief member of the Chinese syndicate which coöperated in the securing of the options. Messrs. Alden, Symington & Co. are the London house associated with George A. Alden & Co., of Boston; the New York Commercial Co.; and Adelbert H. Alden, of Pará and Manáos. Mr. Alden is at present in Europe, and is understood to have participated personally in the negotiations in London.

Twenty thousand shares in the new company—11,500 preferred and 8500 common—were offered for subscription in Colombo. The *Times of Ceylon* stated in May that Bukit Asahan contained 80,000 rubber trees 6 years old, which it was estimated should yield 80,000 to 100,000 pounds of rubber next year, in addition to which there is some profit to be derived from tapioca.



TAPPING MARKS ON "HEVEA."  
[Showing effects of cutting into the wood.]

INJURY TO RUBBER TREES FROM TAPPING.

It has long been appreciated that much injury comes to a rubber tree that is carelessly tapped, particularly where the cutting tool goes through the bark and penetrates the wood. Of course, the specific injury to be guarded against is the rotting of the wood and its attack by insects. Even when the cut heals over and no such danger comes to the tree it is still set back in growth appreciably as is proved by the accompanying illustration. This represents a section of a *Hevea Brasiliensis* grown in the botanic gardens at Singapore, and while it was tapped with reasonable care the bark was penetrated even to the wood. It will be seen from a careful examination of the tree section that although several inches of woody growth formed over the tapped surface the scar still re-

mained in the interior of the tree. The illustration is an especially interesting one and should carry a warning to planters against careless tapping. It is made from a photograph presented to the Editor of THE INDIA RUBBER WORLD by Professor H. N. Ridley, F. L. S., during the former's visit to Singapore.

## NEW CEYLON COMPANIES.

GRAND Central Ceylon Rubber Co., Limited, gazetted at Colombo, July 8; nominal capital, 2,000,000 rupees [= \$648,866.50], in 20,000 shares, of which one half have been subscribed and fully paid. To acquire the Urumewella estate, in the Kegalle district, on which 669 acres are planted with rubber and further



planting is planned for this year. Directors: Hon. J. N. Campbell, J. P. Anderson, W. Forsythe, Joseph Frazer, and W. Shakespeare, all of Ceylon. The prospectus originally issued involving a capitalization of 5,000,000 rupees [See THE INDIA RUBBER WORLD, June 1, 1905—page 300] was withdrawn, and it is understood that another company will be formed to acquire the remaining lands involved in the first transaction.

=The Rubber Plantations of Kalutara, Limited, gazetted at Colombo, July 8; nominal capital 300,000 rupees [= \$97,329.98], to purchase 118 acres specified in the prospectus, and other lands as occasion may offer. No prospectus issued, and no appeal to the public.

=Panawatte Tea and Rubber Estates, Limited, registered in London on June 19, with a capital of £60,000 [= \$291,990] in £5 shares, to acquire properties in Ceylon as follows: Panawatte estate, in Yatiyantota, comprising 942 acres, including 605 acres in tea interplanted with rubber; Yogamma estate, in Dehiowita consisting of 1186 acres, of which 483 are in tea, interplanted with rubber, besides 140 acres lately planted in rubber alone. The members of the board are resident in London with the exception of J. Forbes, broker, of Colombo.

=Udabage Plantation Rubber Co., Limited, registered in London July 24, with £25,000 [= \$121,682.50] capital, in £1 shares, to acquire the Udabage tea and rubber estate, of 1140 acres, in the Kelani valley, Ceylon, and other properties, and to grow India-rubber and other products. Registered office: 101, Leadenhall street, E. C., London.

#### TRACING RUBBER TO ITS SOURCES.

THE fact that plantation rubber from Ceylon and the Straits has become an established commercial commodity of importance is indicated by the regular cabling of reports of sales of such rubber in London to the Far Eastern newspapers. A specimen telegram of this nature appears in *The Times of Ceylon* of Colombo, as follows:

LONDON, July 21.—The rubber market is quiet. Plantation prices are 6s. 2d. to 6s. 3d.; and fine Pará 5s. 4½d. The prices of individual makes are: Heatherly, 6s. 3d.; Ballagalla, 6s. 2½d.; Culloden, 6s. 2½d.

The names appearing in this dispatch are those of important and well known estates in Ceylon, regarding which Ferguson's "Ceylon Handbook" published a year ago contains the following details:

**Heatherly** estate, Naboda postoffice, Kalutara district. Owned by Rosebaugh Tea Co., Limited; R. W. Harrison, resident manager; area 520 acres; 340 acres in tea; 64 acres in rubber, besides rubber interplanted with the tea.

**Ballagalla** (included in Glen Alpine) estate, Badulla postoffice, Badulla district. Owned by Ouvah Coffee Co., Limited, London; John Rettie, resident manager; area of Glen Alpine, 1971 acres; other details lacking.

**Culloden** estate, Naboda postoffice, Kalutara district. Owned by Rosebaugh Tea Co., Limited; R. W. Harrison, resident manager; area 1488 acres; 837 acres in tea; 358 acres in rubber, besides 178 acres of tea interplanted with rubber.

It will thus be seen that the newspaper readers of Ceylon are kept informed not only in regard to prices obtained for rubber produced there, but also of the result realized for the product of each plantation. All of which points to the time, probably not distant, when individual planters, having established a reputation for a given quality of product, will be in a position to supply manufacturers direct with raw rubber "to specifications."

#### CEYLON AND STRAITS PLANTING NOTES.

M. SIDNEY PERRY of Selangor, in the Federated Malay States, in an interview in *The Times of Ceylon*, was reported as follows:

He considers that it has been completely proved that light tapping in

the sixth year improves the latex yielding of the [rubber] tree later on; and quotes as a convincing demonstration of the fact that, out of 153 trees, 33 were lightly tapped in their sixth year, ½ pound of rubber being got from each. The rest of the trees were not touched. In the following year the 33 trees yielded 1.45 pounds of rubber in thirty days, and the 120 trees only 11 ounces [average].

=Mr. J. B. Carruthers, formerly of the public scientific service in Ceylon and lately appointed director of agriculture and government botanist in the Federated Malay States, after having spent a few months in Europe for the study of problems relating to rubber, assumed the duties of his appointment on June 10.

=Mention was made in *The Times of Ceylon* of July 10 of over 7000 acres of crown lands, in different provinces in Ceylon, being under application for planting with rubber, over fifteen government surveyors being at work in locating the same. The *Times* remarks that "The rubber boom has come to stay," and mentions "its permanent hold on the planting and commercial communities."

=The Bukit Rajah Rubber Co. is, says a trade journal, sending out to their estate a Passburg vacuum dryer to dry the crude rubber after coagulation of the latex. The speedy drying of the rubber by artificial means will save not only the necessity for erecting large storage room, but also make it unnecessary to wash the rubber, as this latter is only being done by some growers to hasten the drying process.—*The Straits Times*.

#### THE MERIDEN RUBBER PLANTING CORPORATION.

[Plantation "El Meriden," Tula, state of Vera Cruz, Mexico. Office: Meriden, Connecticut.]

THIS company, formed early in 1902 with a small capital, to acquire a privately formed rubber plantation, continues to make favorable reports of progress, through monthly bulletins sent out by the resident manager, Mr. J. Herbert Foster. These reports, by the way, have been so explicit and informing as to have attracted favorable attention from cultural journals around the world. This gentleman left Meriden when the company was formed, to take charge of the estate, and was absent for more than three years, returning to attend the recent annual meeting, when the original officers were all re-elected: E. W. Smith, president; D. C. McMahon, vice president; F. E. Bemis, secretary; Frank A. Stevens, treasurer. Mr. Foster's family, who had been with him in Mexico, accompanied him on his visit home. The company has at no time offered any stock to the public.

#### THE SAMOA COMPANY REORGANIZED.

[See THE INDIA RUBBER WORLD, April 1, 1905—page 232.]

THE company organized early in the year as the Samoa-Kautschuk Compagnie, with headquarters in Berlin, with an authorized capital of 1,700,000 marks, for the purpose of planting rubber in Samoa, by a resolution of July 21 modified its title and articles. The new name is Kautschukkultur-Syndicat, G.m.b.H. The object of the enterprise is now stated to be the introduction of the culture of Caoutchouc in tropical countries, and especially in the German colonies, said culture to include the plantation system, as well as later on planting by the natives. Carl Boehmer, a merchant of Berlin, has been appointed deputy business manager, W. Mertens remaining in the position of manager.

\* \* \*

RUDOLPH A. ADLER, of Cambridge, Massachusetts, sailed from New York on July 29 for Nicaragua, to become superintendent of the "La Taz" rubber plantation, in the department of Leon, which is owned by J. M. Barris and others of Lynn, Mass., and which is devoted to the cultivation of Ceará rubber (*Manihot glaziovii*).

## OBITUARY.

**R**HODES LOCKWOOD, president and treasurer of the Davidson Rubber Co. (Boston), died on August 4 in a hospital as the result of an automobile accident while on his way two days earlier to the office of his company. The trouble was caused by the breaking of the front axle, which caused Mr. Lockwood to be thrown violently to the ground; his son Rhodes G., who was driving, was only slightly injured.

Mr. Lockwood was born in the old Fort Hill district of Boston, September 26, 1839, and was graduated from the Chauncey Hall School in 1857, after which he filled several business positions, until 1868, when he became a partner with his brother, H. D. Lockwood, in carrying on the business of the Davidson Rubber Co. H. D. Lockwood dying a few years later, Rhodes Lockwood took in partnership a third brother, under the firm name R. & P. C. Lockwood. Still later the third brother retired and Rhodes Lockwood took into partnership his sons, William N. and Rhodes G., under the firm name Rhodes Lockwood & Co., for the ownership of the property, although during the whole time the manufacturing and selling business has been conducted under the name of the Davidson Rubber Co. Last year a corporation was formed under the latter name, taking title to the property. It might be mentioned that Rhodes Lockwood's first connection with the business really was in 1858, when for a few months he was employed in the office of the rubber company. This is an important druggists' sundries firm, which owes its name to the late Dr. Herman E. Davidson, the inventor of the Davidson syringe and descended from Francis Davidson, who was wounded at the battle of Bunker Hill. The subject of this sketch was the son of Rhodes G. Lockwood, a native of Providence, Rhode Island, who removed to Boston, where he was engaged in business for many years, and his mother was the sister of Dr. Davidson, above mentioned.

Mr. Lockwood was until recently a director of the Bunker Hill National Bank. He was a member of the auditing committee of the Warren Institution for Savings, a director of the Boston Woven Hose and Rubber Co., a member of the Bunker Hill Monument Association, the Massachusetts Horticultural Society, the Charitable Mechanics' Association, and a number of other organizations. He resided in Charlestown until about 25 years ago, when he removed to Beacon street, Boston. He also owned a delightful summer residence in East Lexington, which was his home at the time of his death. He is survived by three sons—R. G. Lockwood, W. N. Lockwood and Philip C. Lockwood—and three daughters, Mrs. Dr. G. C. Green and Misses Henrietta and Emily Lockwood.

The funeral occurred on Saturday, August 5, from the East Lexington house, the officiating clergyman being the Rev. Dr. Bushnell. The floral offerings from business and personal friends were massed at one end of the drawing room, completely covering the casket and softening the stern reality of the sad event that brought the many mourners there. The services were brief, a quartette out on the vine covered veranda singing "Hark, Hark, My Soul" and "Paradise," and the

clergyman reading appropriate scriptural selections, followed by a touching tribute to the deceased. The interment was in Mount Auburn cemetery.

Rhodes Lockwood was of the very best type of New England business men. Modest in his bearing, always the courteous gentleman, of unusual culture, patrician to his finger tips, wise in his judgments, always thoughtful of others, of striking personal presence, he was loved and respected by all with whom he came in contact.

\* \* \*

LEVI LADD, treasurer of the town of Needham, Massachusetts, died in that town on August 8, in his seventy-first year. In 1870 he became interested with the late Charles M. Clapp and Robert D. Evans under the style Clapp, Evans & Co., rubber goods jobbers in Boston and operating the Aetna Rubber Mills, at Jamaica Plain. After this copartnership closed, Mr. Ladd was interested with Mr. Evans and George H. Hood in the Eagle Rubber Co., also with a factory at Jamaica Plain, the business of which was merged in time with the American Rubber Co., the large factory of which is still in operation at Cambridge, Mass. Mr. Ladd became a resident of Needham in 1870, and in 1881 became town treasurer, to which position he has since been reelected every year.



THE LATE RHODES LOCKWOOD.

\* \* \*

WARWICK H. PAYNE, who for a number of years had represented the Eureka Fire Hose Co. (New York) in the sale of their fire hose in the Southern states, with headquarters at Atlanta, Georgia, died recently after an illness of several months. He was thirty years of age, a native of Scottsboro, Alabama, educated at the University of Alabama and a graduate in law. He was sometime secretary to General Joe Wheeler, was president of the Confederate Sons Association, and was identified with the Smithsonian Institution at Washington as an expert on Indian relics.

\* \* \*

ALBERT A. SANBORN, of Newark, New Jersey, died at his cottage at Greenwood Lake on August 5. He

was born in 1846 near Rockford, Illinois, and at Albany, New York, married a daughter of Isaac Smith Hyatt, who, with his brother John W. Hyatt, was identified with the establishment of the celluloid industry. Mr. Sanborn, it is said, first suggested the making of collars, cuffs, and shirt fronts from sheet celluloid, and for many years he was in charge of this branch of the work of the Celluloid Co. (Newark, N. J.)

\* \* \*

JOSEPH W. GREEN, treasurer and general manager of the Glendale Elastic Fabrics Co. (Easthampton, Massachusetts), died at his home on August 28, in his fifty-seventh year, after an illness of more than a month. He was born in Marblehead, Mass., August 23, 1848, and at the age of 18 became employed by a Boston house of dealers in shoe findings. He made a specialty of elastic shoe gorings, which brought him to the notice of the Glendale Elastic Fabrics Co., and in 1878 he went to Easthampton as treasurer of that company, and ever since had been in the immediate direction of its affairs. Mr. Green was interested in other business institutions in Easthampton, and active in social and political life, and in municipal affairs.



## RUBBER INTERESTS IN EUROPE.

## A NEW SEDDON TIRE SYNDICATE.

THE Motor Pneumatic Tyre Co., Limited, has been floated in London with £150,000 capital, to acquire the business of the British Motor Tyre Syndicate, Limited, of Manchester, manufacturers of pneumatic and other carriage tires and accessories. The purpose of the company in particular is to acquire the Seddon tire patents and the benefits (1) of the royalty payable by David Moseley & Sons, Limited, in respect of the Seddon patents; (2) of the agreement for the sale of the American rights under these patents for £50,000; and (3) of the agreement for the sale of the French and Belgian patents for the minimum sum of £50,000. It is estimated in the prospectus of the new company that, assuming it will supply 5 per cent. of motor tires required in great Britain, the gross yearly profit on sales will amount to £40,000 and the net profit to £27,500, leaving after paying 10 per cent. on the share capital £12,500 for reserve and contingencies. Messrs. Moseley will continue to manufacture the Seddon tires on the same terms as under the old arrangement. The new company was registered July 20, 1905.

## TORRILHON ET CIE. REORGANIZED.

THE firm of Torrilhon et Cie., India-rubber manufacturers, having its principal works at Chamalières, near Clermont-Ferrand, France, with an annex at Royat, was lately dissolved, the business being converted into a limited liability company, under the style "Société anonyme des anciens établissements J. B. Torrilhon—Caoutchouc manufacturé." The industry was founded in 1852 by Monsieur J. B. Torrilhon, who in 1889 organized the firm Torrilhon et Cie., resigning a share in the management to his son in law, G. Lamy-Torrilhon. The new company has a paid up capital of 4,000,000 francs [= \$772,000], and the board is composed as follows: Eugene Labesse, president; G. Lamy-Torrilhon, managing director; J. B. Torrilhon and Armand Torrilhon. The works are devoted to the production of hard and soft rubber, principally mechanical goods and tires, but including also waterproof clothing and druggists' sundries. For some years past the Messrs. Torrilhon have maintained agencies in French Africa for the direct importation of crude rubber.

## A GERMAN RUBBER MANUFACTURER HONORED.

HERR LOUIS PETER, the founder of the Mitteldeutsche Gummiwaaren-Fabrik Louis Peter (Frankfurt a/M.), has been granted the honorary title of *Kommerzienrat* (commercial councillor) in recognition of the progressive spirit shown in the development of his business and the success attained in bringing it from very small beginnings to its present important dimensions. Not only does the firm possess branches in all the more important cities of the Continent, but its products are sold extensively in other parts of the world, the "Peter's Union" tire, for example, being understood to have a considerable sale in Africa. It will be remembered that this firm was represented by an extensive display of tires and other goods at the St. Louis Exposition of 1904.

## DEATHS IN THE GERMAN RUBBER TRADE.

THE Mannheimer Gummi- Guttapercha- und Asbestfabrik (Mannheim) has suffered a painful loss by the decease of a member of the supervisory board, Herr Simon Hartogensis, consul general of the Netherlands, who died on July 28, at the age of 79. The deceased had for several decades been a member of the supervisory board, and has largely contributed to the success of the company by means of his great business talent,

his extensive knowledge, eminent capacities, and large experience, while he was likewise generally esteemed and honored as a man, on account of his noble and lovable characteristics. The death of this distinguished man is the more regrettable for the company, as the deputy chairman, Geheimer Kommerzienrat Scipio, died only three months ago, while it lost by death in 1904, Dr. Rohn, a member of the supervisory board, and in the preceding year Kommerzienrat Engelhorn, who had been chairman for many years past.—*Gummi Zeitung*.

## THE TEXTILE GOODS MARKET.

EXISTING conditions in the cotton market are characterized by a buoyancy not usual even in a market so subject to sudden and radical change. The disposition toward fluctuation is more pronounced than for a long time, with the speculative element so organized as to enable it to "bull" the market with greater promise of success than in any previous year. The speculative feature is a serious detriment to the cotton trade, as cotton stock market quotations are misleading, affording as they do false ideas to buyers in reference to the cost of cotton to the mill.

The demand from the rubber trade for every description of cotton is greater than at any period in the history of these two great industries. Every American cotton duck mill is working its full capacity, and a number of those making coarse goods for export are well sold ahead, a condition which naturally abrogates supply. The mechanical rubber trade has consumed more hose duck than has ever been used in the same period before, and considerably more than was anticipated or covered by contract. The price of regular hose and belting duck is now 21 cents a pound.

A heavy fall demand is anticipated by mill agents, who are apprehensive lest the supply shall not equal the call, as the present market is practically cleared of spot goods. It is estimated by competent authority that the raw material will not sell below 10 cents during the fall season. With a maximum crop of 11,000,000 bales, and a surplus of 1,000,000 carried over from last season, the working crop will not exceed 12,000,000 bales. The spot market at this writing is 10¾ cents. The crop at the close of the cotton year (virtually coincident with the present issue of THE INDIA RUBBER WORLD) is likely to prove wholly inadequate to the demand, certain portions of the Georgia crop already being seriously affected by boll weevil and rust, which adverse elements will naturally affect the size of the crop in proportion to the extent to which they prevail. Despite the fact that textiles have been consumed in so much greater quantities during the past year than ever before, the market has not changed very radically, though prices are naturally strong.

The demand for Sea Island and Egyptian cotton has materially increased, owing to their consumption in the manufacture of automobile tires. Duck for air break hose and stitched belting has never been in such active request. Another condition strengthening the duck situation is the demand for numbered and army ducks incidental to present military activity, which has resulted in unprecedented consumption.

## CURRENT QUOTATIONS AT NEW YORK.

<i>Sheetings.</i>			40° Selkirk ... 8 c	40° Swansea..... 9 c.
40° Highgate .. 6¼ c.	40° Sellow .... 7¾ c.	<i>Ducks.</i>		
40° Hightown... 7 c.	48° Mohawk... 11 c.	40° 7 oz. Cran-		
40° Hobart..... 7¼ c.	40° Marcus... 6½ c.	ford ..... 9 c.		
40° Kingstons... 8 c.	40° Mallory... 6 c.	40° 8 oz. Chart-		
39° Stonyhurst.. 6 c.	30° Capstans... 4 c.	res..... 10 c.		
30° Solosis..... 5¼ c.	<i>Onabings.</i>		40° 10 oz. Carew 12 c.	
40° Seefeld.... 8¾ c.	40° Iroquois... 10 c.	40° 11 oz. Carita 13 c.		

## RUBBER GOODS IN COMMERCE.

## EXPORTS FROM THE UNITED STATES.

THE following is an official statement of values of exports of manufactures of India-rubber and Gutta-percha for seven fiscal years, ending June 30:

YEARS.	Belting, Packing, and Hose.	Boots and Shoes.	All other Rubber.	TOTAL.
1904-05 . . . . .	\$991,100	\$1,214,342	\$2,572,375	\$4,780,817
1903-04 . . . . .	879,476	1,086,364	2,469,750	4,435,590
1902-03 . . . . .	819,985	1,056,491	2,299,875	4,176,351
1901-02 . . . . .	634,146	1,046,315	1,781,941	3,462,402
1900-01 . . . . .	565,726	724,015	1,727,527	3,017,268
1899-00 . . . . .	541,830	420,746	1,405,212	2,367,788
1898-99 . . . . .	(a)	260,886	1,504,499	1,765,385

[ (a) Included in "All Other" prior to July 1, 1899 ]

The number of pairs of rubber footwear exported during the past six years has increased as follows:

1899-00.	1900-01.	1901-02.	1902-03.	1903-04.	1904-05.
762,016	1,469,100	2,594,688	2,307,401	2,310,808	2,390,539

## SHIPMENTS TO NON CONTIGUOUS TERRITORIES.

[Not Included in the Preceding Table.]

DESTINATION.	Belting, Packing, and Hose.	Boots and Shoes.	All other Rubber.	TOTAL.
<i>Alaska:</i>				
1902-03 . . . . .	\$30,278	\$ 90,050	\$15,654	\$135,982
1903-04 . . . . .	37,730	85,367	15,739	138,836
1904-05 . . . . .	44,732	166,643	22,846	234,221
<i>Hawaii:</i>				
1902-03 . . . . .	\$29,396	\$ 7,436	\$27,483	\$64,315
1903-04 . . . . .	36,761	11,679	32,508	80,948
1904-05 . . . . .	23,285	6,891	36,560	66,736
<i>Porto Rico:</i>				
1902-03 . . . . .	\$1,855	\$ 1,386	\$12,445	\$18,686
1903-04 . . . . .	9,085	254	16,797	26,136
1904-05 . . . . .	9,791	251	20,212	30,254
<i>Philippines:</i>				
1902-03 . . . . .	\$20,692	\$ 2,396	\$35,773	\$58,861
1903-04 . . . . .	32,835	4,553	36,402	73,790
1904-05 . . . . .	29,548	7,419	30,696	67,663
<i>Totals:</i>				
1902-03 . . . . .	\$ 85,221	\$101,268	\$ 91,355	\$277,844
1903-04 . . . . .	116,411	101,843	101,446	319,710
1904-05 . . . . .	107,356	181,244	110,314	398,914

## IMPORTS INTO THE UNITED STATES.

	1902-03.	1903-04.	1904-05.
India-rubber goods . . . . .	\$665,972	\$ 821,562	\$1,389,064
Gutta-percha goods . . . . .	225,198	335,460	117,735
Total . . . . .	\$891,170	\$1,157,042	\$1,506,799
Reexports . . . . .	8,656	4,704	12,522
Net Imports . . . . .	\$882,514	\$1,152,338	\$1,494,277

## AMERICAN RUBBER SHOES IN TURKEY.

CONCERNING the importation of India-rubber goods in Turkey, the consul of Austria-Hungary at Saloniki embodies the following remarks in his last annual report:

"The importation of rubber elastic for garters is fairly important, as is likewise that of ready made hose supporters, for men and women, as well as of suspenders, impregnated rubber shields, and elastic cloth for shoes, all of which articles are mostly imported from Austria-Hungary. As has been frequently remarked before this, the consumption of rubber shoes made in Austria Hungary is continually decreasing, as these goods are being more and more supplanted by the lighter and cheaper American product. While the sale of rubber shoes from Austria-Hungary during the preceding year amounted

to nearly 50 per cent. of the total import, it has decreased to 30 or 35 per cent. during the year covered by the report.

"It is true that the Austrian goods still continue to be favorably known for their quality, but by far the larger part of the purchasing public prefers the American product on account of its reasonable price and attractive shape, although it is much lighter and consequently less durable. Prices of American rubber shoes are slightly higher than during the preceding year, on account of the rise in the price of the crude material, men's shoes being quoted at 90 to 95 cents; boys' and women's shoes at 70 to 75 cents; and children's shoes at 60 to 65 cents American currency, per pair, delivered at New York, packing free. It will be well to note that these goods are packed in boxes, one pair to a box, which makes them especially salable. In waterproofs there is a strong demand for the product of Austria-Hungary, especially in the medium grades, but England, with its cheap grades, still ranks first in the amount of its imports, while Germany principally furnishes goods of higher quality."

## STANDARD THREADS FOR FIRE HOSE NOZZLES.

WRITING in *Fire and Water Engineering* (New York) Mr. F. W. Shepperd advocates the adoption of standard hose threads for fire department equipment, a question which has been under discussion for the past thirty years. It appears that the National Fire Protective Association has reported in favor of a 7½ thread to the inch, and this has been endorsed by the American Water Works Association. Two other associations are yet to be heard from on the subject—the New England Water Works Association and the International Association of Fire Engineers. The United States department of Commerce and Labor is said to have expressed an interest in this subject, and, it is expected, will endorse the standard thread that may be approved by the greater number of the associations interested. In a certain report quoted by Mr. Shepperd, it is shown that in a total of 1339 cities and towns using 2½ inch inside diameter, with outside diameters ranging from 3 to 3½ inches, and threads from 7½ to 8 per inch, 70 per cent. of the equipment may be changed to the adopted standard at very little expense. Mr. Shepperd's paper is accompanied by expressions of opinion from various sources, including letters from a number of rubber manufacturing companies, one of which reads:

We would state, first, that we have no preference for any particular thread. Second, it would make no difference to us should a standard thread be adopted.

The meaning of this statement, which voices the sentiment of a number of other manufacturers, doubtless is that orders received by rubber manufacturers are based upon definite specifications, and one is concerned little about what the specifications are sent to another factory. The letter continues, however:

On the other hand, we should like very much to see a standard thread adopted, as it will enable us to carry couplings for fire hose in stock, which would be a great convenience, as well as prove a material saving both in time and money.

It may be added that one of the arguments for the adoption of a uniform fire hose coupling throughout the United States is that any city fire department, when called upon, could lend aid to another—an argument which had a practical illustration on the occasion of the recent great fire in Baltimore, when the friendly services offered by neighboring cities might have been more efficient had all the hose in use been provided with a uniform coupling.



## PRESIDENT DIAZ ON RUBBER PLANTING.

HENRY C. PEARSON IN "LESTIE'S WEEKLY."

"WHAT," I asked, "is the attitude of the Mexican government toward the American people?"

The reply the President made, coming from the head of the country of American opportunity, and from the man whose force, intelligence, and patriotism have raised Mexico to its present level, who now controls that republic, and who has laid down the course of its future, is, I believe, one of the most significant that has ever been presented to the attention of the people of the United States.

"We are two sister republics, next door to one another," said the President; "the United States has the wealth and the intelligence. Mexico has the undeveloped resources; and Mexico is glad to welcome and coöperate with Americans and to encourage the investment of American capital."

This, added the President, should not be understood to suggest the exclusion of the men or means of any other foreign nation, for Mexico intends to be impartial and just. Then he amplified. The development of the natural resources of the country meant the increased prosperity of the Mexican people. American capital and intelligence must both be employed to this end. The Mexican government, he said, welcomes the foreigners. In railroads and other industries American enterprise in Mexico is growing. "I sign many mining titles," said the President, "and 50 per cent. of them are for Americans."

And there is no mistaking the sincerity of the Mexican government and the foremost citizens of Mexico in this. The broad men of Mexico appreciate that the invasion of American capital in Mexico, which is only just beginning, will no more tend toward the absorption of the Mexican territory by the United States than has the development by English capital in America made us the vassal of the older country.

"Do you consider railroad building the most important element in the development of Mexico?" I asked.

The President replied emphatically in the affirmative. Only a few men, he said, could be the owners of mines or engaged in other large enterprises; but railroads distribute the population and furnish opportunities to persons of small means in agriculture and other fields. And in this connection the President spoke of a recent visit to Vera Cruz and the plantation district in that region. He had observed the progress of the rubber industry and sugar cane and coffee.

"Some Americans," said General Diaz, "are expending too much money in the cultivation of rubber, because in many cases they have cleared the ground entirely to plant the young trees. It would be more economical if they would clear only strips in the forest. The young trees would then receive the protection of the older forest trees and yield more liquid. In general," added President Diaz, "Americans are not economical enough in their plantations. They overcharge the production with expenses. You see a contrast in the tropical region between the American and the Mexican planters. From the appearance of the latter you would imagine that they are penniless, yet many such are the owners of big plantations, and are prosperous because they have practiced the proper economy."

## THE UNITED STATES AND ENGLAND IN MEXICO.

THE New York *Herald* [June 14] contains a despatch from Mexico City, stating that Great Britain will no longer maintain a consulate there, and that the consular business of that district will be combined with the office at Vera Cruz. Regarding the reasons for this change the *Herald* quotes Mr. Lucien J. Jerome, the consul at Mexico City, as follows:

"The investment of additional British capital in Mexico will not be encouraged. England feels that the United States has a preferred claim to Mexico's trade and to the opportunities for industrial development in this republic. No campaign will be made by British interest to wrest Mexican trade from the United States and no efforts will be put forth by the British consular service to encourage the investment of English capital in Mexico. The United States is right at Mexico's door and it is reasonable that it should obtain the bulk of Mexico's trade. England is interested in Argentina and Chili, but outside of those countries there is no Latin-American country that we care much about."

The *Herald's* report mentions that a great deal of English capital was invested in Mexico formerly, but "after the fall of the Maximilian empire the interests of the Britons dwindled rapidly and British firms were one after another liquidated or withdrawn until only a few survivors remained. Despite the desertion of the British capitalist and business man, British interests remained in control of the Banco de Londres until last month, when the institution passed into French hands and the capital was largely increased. This was what might be termed the death blow to British commercial and financial power in Mexico."

## "AN AMERICAN ANALOGY."

UNDER the above heading *The Times of Ceylon*, in a review of some remarks by the Editor of THE INDIA RUBBER WORLD before the Mechanical Rubber Manufacturers' Association of the United States, says:

"That recognized authority on rubber, Mr. Henry C. Pearson, of New York, carried away from Ceylon, after his visit of two years ago, a high estimate of the enterprise of the Ceylon planter. And he not only remembered the *raison d'être* in a speech at a recent gathering of rubber manufacturers, but built up an analogy between tea and rubber, and suggested that this island could parallel in rubber what it had accomplished in tea. Our present staple is turned out, at a general average, at just below 400 pounds of made tea per acre; and our rubber supply will average the same from all suitable land, well planted. But are there 400,000 acres in Ceylon suitable for rubber? There was a time when the estimate was 100,000 acres; but this can now be doubled, for we see no reason why irrigated alluvial land should not be counted. We believe some of it will be brought into use for rubber as yielding a greater profit than paddy [rice], and much land not yet regularly cultivated is equally good, but too remote from constant European supervision. This is where the government scheme for leasing land would have come in well, had the authorities been prepared, for one thing, to forego the water rate of 2 rupees per acre for the first five years, or until the success of experimental rubber cultivation by irrigation by pioneers in this direction had been established. The high water rate—1 rupee per acre would, perhaps, have been accepted—has prevented one attempt in the southern part of the island; and either those who were inclined to take it up have saved their money or the development of that part of the island has been considerably suffered."

RUBBER STAMPS BARRED.—The controller of the city of Pittsburgh, Pa., recently declined to approve a number of bills signed by the head of one of the city departments with a rubber stamp made in *facsimile* of his autograph. The commissioner in question was absent on a vacation at the time and arranged for having the bills signed as stated above, and their payment was "held up."

## NEWS OF THE AMERICAN RUBBER TRADE.

## THE FIRST RUBBER SHOES MADE IN AKRON.

ON Monday, July 31, The B. F. Goodrich Co. made what was undoubtedly the first pair of shoes manufactured in Akron. These were simply samples, made to try patterns, but they mark an epoch in the development of the rubber industry in a city which has become the largest rubber manufacturing center in the world. Since August 1 the company have been making sample shoes in the various styles they intend to manufacture, and within a few weeks will be turning out a regular ticket. The new buildings to be devoted to their rubber footwear department are practically complete and the machinery installed. It is understood that the company employ many distinctive features in connection with the shoe manufacture.

## ENLARGEMENT OF A TRENTON FACTORY.

THE extensive new addition to the plant of the United and Globe Manufacturing Cos. (Trenton, New Jersey), first mentioned in THE INDIA RUBBER WORLD, February 1, 1905 (page 171), and which is intended to double the productive capacity of company, will be completed, it is thought, by October 1. The buildings are under roof, and the machinery is being put in position. On August 4 the big smokestack, whose summit is the highest point in Trenton, was finished, and the occasion was marked by a brief ceremony which included the surmounting of the stack by an American flag. The new plant is equipped with a 750 HP. Allis Chalmers steam engine, and the principal new building is to be devoted to the manufacture of hose, belting, and packing.

## EUREKA FIRE HOSE CO. IN THE SOUTH.

MR. P. O. HEBERT, No. 615 Peters building, Atlanta, Georgia will hereafter represent the Eureka Fire Hose Co. (New York) as general sales agent for the exclusive sale of their products in the states of Georgia, Alabama, Mississippi, Louisiana, North Carolina, South Carolina, Florida, Virginia, Texas, and Oklahoma and Indian territories. Associated with Mr. Hebert will be Mr. D. E. McGaw, located at Dallas, Texas; Mr. H. H. Algis, at Charlotte, North Carolina; and Mr. C. B. Payne, New Orleans. Mr. Hebert succeeds the late Mr. Warwick H. Payne, whose death is reported on another page.

## REPUBLIC RUBBER CO.—A NEW LINE.

THE Republic Rubber Co. (Youngstown, Ohio) have decided to add automobile tires to their line of manufacture, making a tire in conjunction with a patented attachable automobile rim which has been tested to the company's satisfaction. Their automobile tire department has been placed in charge of Mr. Todd Mell, who has been identified with the tire industry at Akron for several years.

## FABRIC FIRE HOSE CO.

THE executive offices of the Fabric Fire Hose Co., formerly of No. 68 Murray street, New York, have been transferred to the Graham building, corner of Duane and Church streets. The new quarters are commodious and handsomely equipped, and in every respect well adapted to the handling of increased business which rendered the former offices inadequate. This department, which is the headquarters of W. T. Cole, general manager, is very accessible to the trade, who will certainly find it a pleasant place to visit. The former office quarters, at No. 68 Murray street, are retained as a shipping department. The company have recently issued a booklet entitled "Fire Engi-

neers Hand Book," which contains valuable information concerning hydraulics and fire hose, as well as a comprehensive exposition of first aid to the injured. This instructive and interesting publication may be had upon request.

## GOOD SELLING WORK APPRECIATED.

FOLLOWING the recent annual meeting of the Hartford Rubber Works Co. a substantial sum of money was distributed among the branch managers and traveling representatives, in addition to their regular incomes. For two years past the company has been giving special attention to certain improvements in the Dunlop tire and rim, in the marketing of which of late they appear to have been very successful. An official of the company advises THE INDIA RUBBER WORLD:

"The success of the tire, and the good work of our selling force, has been so marked that the directors felt compelled to show their appreciation in a tangible form and therefore appropriated a part of the profits for the past half year for distribution among the branch managers and traveling representatives. That you may fully understand the reason for this action, we would explain that while in 1903 and the early part of 1904, we, as automobile tire manufacturers, were at the bottom of the list, in 1905 we climbed to the top."

## ENTERPRISING HARTFORD.

A RECENT special edition of the Hartford (Connecticut) *Telegram*, devoted to an exposition of the extensive and varied industries of that city, presents a unique feature in the shape of the formal signatures, in *facsimile*, of several hundred corporations, firms, and individuals—leaders in their respective branches of business—signed to a "proclamation" of Hartford's advantages as a location for manufacturing and business. There is also a series of descriptions of representative houses, including the Hartford Rubber Works Co., so prominent in the production of rubber tires, and The Johns-Pratt Co., makers of the "Valcabeston" (rubber and asbestos) packings.

## THE ALLING RUBBER CO.

THE ninth rubber goods store in Connecticut operated under the name The Alling Rubber Co. was opened at No. 139 Bank street, Waterbury, at the last of June, with W. C. Minor, lately of Bridgeport, local manager. The Waterbury business is owned by the corporation The Alling Rubber Co., of New Haven, which operates also the stores at New Haven, Bridgeport, and Meriden. The capital stock of this company was increased from \$24,000 to \$40,000 at the time of opening the Waterbury store. The stores at Stamford, New Britain, Hartford, Norwich, and New London, though owned by the same interest, are operated independently of the corporation referred to. All these stores reported a fair average trade for the season in garden hose, and the general business throughout Connecticut was good.

## OUTING OF RUBBER MEN AT AKRON.

EMPLOYÉES of The B. F. Goodrich Co., the American Hard Rubber Co., and the Alkali Rubber Co. held a joint picnic on August 12 at Silver Lake near Akron, Ohio, which it was estimated was attended by 10,000 people, including members of the employé's families and their friends. C. S. Eddy, of the Goodrich company, was general chairman, and the chairmen of the committees were as follows: H. E. Joy, transportation; E. H. Koken, music; H. K. Raymond, entertainment; John Joseph, sports. The Hard Rub-



but team won the trap shooting contest from the Goodrich team, G. B. Comey winning the free-for-all contest. The baseball game between the Goodrich and Hard Rubber teams was won by the former. There were a number of other contests, including a waltzing competition, the first prize in which was won by C. E. Kelley and Miss May Ross. This was the twenty-fourth annual outing of the Goodrich employes, and one of the most successful and enjoyable of the series.

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THE annual excursion by the Diamond Rubber Workers' Relief Association to Cedar Point, near Sandusky, Ohio, on August 19, was the largest ever run by the employes of the Diamond Rubber Co. M. A. Flynn was the chairman of the committee on general arrangements, W. N. Fitz was treasurer, and H. J. Bittaker secretary. Lewis Grather and Harvey Snyder were in charge of the transportation. The Baltimore and Ohio railway sent some of their best men to look after the comfort and safety of the excursion. There were 1879 tickets sold and 22 coaches were required. The Diamond Rubber Co. contributed a handsome sum toward the expense of the outing. There was no formal program, but dancing and bathing were indulged in largely, and the day was thoroughly enjoyed.

#### FACTORY IMPROVEMENTS AT NAUGATUCK.

THE factory of the Goodyear's Metallic Rubber Shoe Co.—the Wales-Goodyear factory—at Naugatuck, Connecticut, has been run practically without a shutdown for several years, until this summer, when it has become necessary to close for several weeks for the purpose of making important improvements in the plant. The company are installing two Hewes & Phillips tandem compound condensing engines, one 22" × 40" × 54" to develop 850 HP., and one 17" × 34" × 48" to develop 575 HP., each engine having one independent horizontal jet condensing apparatus. An additional building has been constructed for the electric light plant, and in it installed a new 17½" × 17" Harrisburg "Fleming" four valve, self oiling, automatic cut off engine, 192 HP., direct connected to a 125 KW 110 volt Crocker-Wheeler generator. The same building includes the old 15" × 14" 125 HP. Harrisburg engine, direct connected to a 75 KW 110 volt General Electric generator. There is being installed a 7" × 10" vertical triplex single acting boiler feed pump, to be driven by a 30 HP. 106 volt C. & C. motor. There has recently been built an addition to the boiler room and installed three new Manning type vertical tubular boilers. The company expect to have their improved equipment in operation early this month.

#### STOCKTON RUBBER CO.

THE Stockton Rubber Co., the incorporation of which, under the laws of New Jersey, to manufacture reclaimed rubber by an original acid process, was reported in the last INDIA RUBBER WORLD, will be under the direct supervision of Mr. Dominic J. Price, who has had over 25 years' connection with reclaiming mills, and for the past 14 years has been superintendent of the New Jersey Rubber Co. The daily capacity of the new company will be about 5 tons, and the factory is expected to be in operation by September 15.

#### FAILURE OF A HORSE COLLAR COMPANY.

ASHLAND Horse Collar Co. (Ashland, Ohio), lately has been involved in bankruptcy proceedings. This company was incorporated in October last under Ohio laws, with \$25,000 capital, to succeed the Pneumatic Horse Collar Co. (Ashland, Ohio) incorporated in March, 1904, with \$100,000 capital, and which was forced to make an assignment in October. The company as first formed included Dee Allen, of Holland, Michigan, president of the American Pneumatic Horse Collar

Co., owners of certain patents. The company organized at Ashland was one of several branch or subsidiary companies, which it was intended to operate throughout the United States. Mr. Allen was not included in the reorganized company at Ashland, but is one of the creditors interested in the bankruptcy proceedings. In May, 1905, he filed a petition in bankruptcy.—The Faultless Rubber Co. (Akron) have been reported to be interested in the horse collar company. It is understood that the Faultless company did expect to make some of the pneumatic collars at their factory at Ashland, and that H. B. Camp, president of the Faultless, made a donation of land for a factory site for the collar company.

#### NEW RUBBER FACTORY AT BOWMANVILLE.

ON July 27 ground was broken for the new factory building to be erected by The Durham Rubber Co., Limited (Bowmanville, Ontario), in connection with which were public ceremonies participated in by Mayor Archie Taft, the officials of the rubber company, and a number of leading citizens, including the editors of the Bowmanville newspapers. There is to be a main building, 225 × 75 feet, and in addition a boiler house and pumping station. The site comprises 7 acres, most eligibly situated. Negotiations are under way for the construction of a spur track from the main line of the Grand Trunk railway to connect with the new factory. THE INDIA RUBBER WORLD of April 1, 1905 (page 247) reported the action of the electors of Bowmanville in voting a by law authorizing a loan to the rubber company named above, and the new building has been planned in accordance with the conditions on which the vote was based.

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THE Sherin Rubber Co. has been formed at Toronto, Ontario, as importers and dealers of rubber goods, and to act as selling agents for The Durham Rubber Co., with offices and warerooms at No. 20 Wellington street, West. The new company includes D. P. Sherin, formerly a selling agent for the Durham company, and P. C. Hogarty who had been a traveler for that company.

#### RUBBER BELTS FOR A GRAIN ELEVATOR.

THE new grain elevator just completed for the Atchison, Topeka, and Santa Fé railway, at Argentine, Kansas, near Kansas City, embodies the latest improvements in grain elevator construction, in connection which special care has been given to the specifications for the rubber belts required. There are all told 36 belts, of varying dimensions, with a total length of 9838 feet, or 1.86 miles. The greater part of the belting is from 32 to 36 inches in width. The conveyor belts are 4 ply, and the elevator belts (those provided with buckets) 5 and 6 ply. The elevator was planned by John S. Metcalf Co. (Chicago) and the construction work was by Witherspoon-Englar Co. (Chicago). The rubber belting was supplied by The B. F. Goodrich Co. (Akron, Ohio).

#### ASBESTOS WORKERS' UNION.

THE second annual convention of the National Association of Heat, Frost, and General Insulators and Asbestos Workers of America began at the Revere House, Boston, on August 8, being attended by delegates from 15 cities, as widely separated as Boston and Seattle. Seventeen locals were represented, of which seven were formed during the year. It was stated that only one labor dispute—at St. Louis—had occurred since the last convention. The union was reported in a good financial condition. On the closing day of the convention, August 13, the following officers were elected: A. J. Kennedy, of St. Louis, president; Charles Uhr, of Boston, vice president; P. G. Jessen, of St. Louis, secretary and treasurer; C. G. Rice,

delegate to the American Federation of Labor. The place for next year's meeting remains to be fixed.

#### THE GOODRICH PICTURE BETTER THAN EVER.

ONCE a year, and usually when dog day weather has taken all joy out of life and left one disgusted and grumpy, comes the pictorial representation of the "Goodrich Rubber Man's Vacation." It is always original, always mirth provoking. This year it is better than ever. If you have not seen the rubber Don Quixote with his faithful gum elastic Sancho Panza ambling down the pike in search of adventure, and further, if you did not know what happened to the doughty knight when the Goodrich automobile came up behind him, you are missing the best thing of the season. The writer does not know exactly what was in the artist's mind in the way of a moral, but the imaginative examiner of this picture can find something that suggests existing trade conditions.

#### LAST OF THE PRESTON HOSE AND TIRE CO.

THE property at Marlboro, Massachusetts, sometime occupied by the Preston Hose and Tire Co. was sold on August 10 under a mortgage held by a local bank. The company named was organized under Maine laws, in 1899, by James F. Preston, who first carried on a factory at Everett, Mass., for making hose of a special fabric. Later the business was removed to Marlboro on the promise of assistance from citizens, which was not realized. Finally Preston removed his plant to Woodville, Mass., but without getting it in operation, and it is now reported to have been sold to parties at Buffalo.

#### THE CLOSED RUBBER FACTORY AT MILLTOWN.

THE factory at Milltown, New Jersey, some time operated by the Milltown India Rubber Co., was mentioned in THE INDIA RUBBER WORLD of February last as having been sold to a Mr. Russell to be used in the manufacture of playing cards. The citizens of Milltown became elated over the prospect of the factory being operated again, but a newspaper report states that, on account of the growing control of the playing card business by a trust, the Milltown plant will not be used for this purpose, nor can it be used again for the manufacture of rubber boots and shoes, a clause in the title to the property forbidding that such goods shall be made there again.

#### CONFERENCE OF THE FISK RUBBER CO.

THE annual conference of officers, branch managers, and salesmen of The Fisk Rubber Co. (Chicopee Falls, Massachusetts) was held during the week beginning August 21, being attended by representatives of the company as far distant as the Pacific coast. The company's factory was visited, new tire features explained, and selling methods discussed. The newly created executive committee provided a banquet at the Worthy Hotel, Springfield, on the evening of August 22, following which Mr. Burton R. Parker, in behalf of the salesmen, presented the president of the company, Mr. Harry T. Dunn, with a handsome silver service. The executive board referred to includes President Dunn; Harry G. Fisk, secretary and treasurer; F. C. Riggs, western sales manager; E. H. Broadwell, Detroit branch manager; and Burton R. Parker, advertising manager.

#### A RUBBER STORE IN NEW HAMPSHIRE.

GRANITE State Rubber Co., on September 9 will open at Manchester, New Hampshire, the first exclusively rubber store in that state. The company has been incorporated under New Hampshire laws, having as its treasurer Mr. Isaac Crocker, of Providence, Rhode Island, who has been connected with the rubber trade for 35 years. The Manchester store will be managed in conjunction with several other stores operated by companies of which Mr. Crocker is treasurer—at Providence, R. I.,

and Lawrence, Lowell, and Brockton, Massachusetts. The Manchester store occupies a floor space of 100 × 22 feet and is located in a modern and attractive building at No. 1030 Elm street. Invitations have been sent to the rubber trade throughout New England, to attend the opening, which is planned to make a gala occasion. The new store will be in charge of H. L. Cropley, as president of the company, who has been connected with the other stores mentioned for a number of years.

#### COMBINATION RUBBER MANUFACTURING CO.

THIS company, whose factory at Bloomfield, New Jersey, continues very busy, announce the opening of a branch in Chicago, at No. 183 Lake street, where they are carrying a complete line of goods, and which will be headquarters for the company's middle Western and Pacific coast trade. This branch is in charge of Mr. F. B. McIlroy, who has been identified for many years with the mechanical rubber goods trade in the West, and has become widely known in it. At St. Louis another branch has been opened, to handle the Southwestern business, in charge of Mr. John D. Ripley.

#### FACTORY ENLARGEMENT AT BATAVIA, NEW YORK.

THE Sweet Tire and Rubber Co. are building a two story addition, 50 × 100 feet, cement construction, to be used for office and shipping rooms. They are also replacing their old engine with a new heavy duty Allis-Chalmers engine 350 HP.; also duplicating their boiler capacity. The additional machinery approximates in value \$10,000. The increased facilities have been made necessary by the large demand for the company's rubber tires.

#### STEAM DRIVEN ISOLATED LIGHTING PLANT.

THE advantages of an isolated plant may be briefly summed up to embrace: (1) the actual convenience of a private plant, (2) the saving in profit incident to buying light and power from a central station, and (3) the possibility of perhaps using some power which is otherwise lying latent. The two principal arguments against small plants—space occupied, and the general opinion of the lack in economy of small plants—have to a considerable extent been met by a group of generating sets which have recently come on the market. These sets, built by the B. F. Sturtevant Co. (Boston), have vertical cross compound engines, and range in capacity from 17½ to 100 KW. They are arranged to occupy very little room and to operate under a maximum steam consumption of from 43 to 31 pounds per kilowatt hour. These results equal those obtained from sets of much greater power and render feasible the economical use of comparatively small units.

#### NEW INCORPORATIONS.

SPINNEY-WISE Co. (Lynn, Mass.), July 31, 1905, under Massachusetts laws; capital authorized, \$40,000. To succeed the partnership firm of Spinney, Wise & Co., manufacturers of hard and soft rubber goods for mechanical and electrical purposes. R. J. Wilkie is president and treasurer and S. W. Culver clerk.

=Industrial Rubber Manufacturing Co., August 8, 1905, under New Jersey laws; capital, \$125,000. Incorporators: Joseph P. P. Alves, Chadwick Scott, and F. L. Richardson, Philadelphia; Wilfred B. Wolcott, Camden, N. J.

=The Aladdin Rubber Co. (Akron, Ohio), August 5, 1905, under Ohio laws; authorized capital, \$100,000. Directors: Will Christy, Cassius M. Gilbert, J. H. Connor, Charles S. Heller and James Christy. James Christy has been elected president, C. S. Heller vice president, C. M. Gilbert secretary and treasurer, and Sidney Connor assistant secretary. The two Messrs. Christy are connected with important industrial enterprises in Akron, and Mr. Heller is the inventor of a rubber reclaiming process, which the company has been formed to exploit, it be-



ing their intention to erect a factory at or near Akron for operation before the end of the year. Mr. Heller was reported in these pages recently to be considering the erection of a reclaiming plant at Olathe, Kansas, but was prevailed upon by Akron capitalists to establish the plant in his home town. The plant will be erected at Fairlawn, at the western border of Akron, and include a three story building 50×60 feet, with a separate power house.

=Howe Rubber Co., August 10, 1905, under New Jersey laws; capital, \$5000. Incorporators: Charles O. Geyer, Frank C. Ferguson, and David S. Bingham—all giving as their address No. 228 High street, Newark, N. J.

#### TRADE NEWS NOTES.

THE directors of the Boston Woven Hose and Rubber Co. have declared a semi annual dividend of \$3 per share on the common stock, payable September 15, 1905, to stockholders of record September 5.

=There was to be a meeting, on August 31, of the shareholders of The Goodyear Tire and Rubber Co., at Akron, Ohio, to consider the advisability of substituting for the bonds of the company now outstanding a new issue of first preferred stock. The bond issue was stated in THE INDIA RUBBER WORLD November 1, 1904 (page 59) at \$245,500—first mortgage, 10 years, at 6 per cent.

=Aiton Machine Co. (New York) have recently augmented their staff by the engagement of Mr. M. A. Pearson, formerly designer and engineer of the Farrel Foundry and Machine Co.; Thomas Waters, late foreman at the Birmingham Iron Foundry; and Charles E. Miller, of the Diamond Rubber Co., who now has charge of the Aiton company's rubber department. This company has also engaged Mr. Raymond Levine, electrical engineer, formerly with the Edison Co., to superintend the rubber department, and, Robert O'Shea, formerly with the National Pipe Bending Co., to head the selling staff.

=Pennsylvania Rubber Co. are erecting a three story steel and brick addition, 100 × 75 feet, to their main factory building at Jeannette, Pennsylvania, this having been made necessary by their increase in business. The company are interested in the Westmoreland Rubber Manufacturing Co., the incorporation of which was reported in this Journal for June 1 last. The building for this company at Grapeville is now under roof and the machinery is being placed, and the operation of the factory is expected to begin by October 1. It will be devoted to the reclaiming of rubber.

=At a recent meeting of the town council of Bristol, Rhode Island, it was voted to grant the petition of the National India Rubber Co. to be allowed to lay (at their expense) and maintain a 14 inch water pipe from the pumping station on Thames street to the company's factory.

=A fire in Toronto on July 28 destroyed several buildings, among which was a storehouse containing about \$60,000 worth of goods belonging to The Granby Rubber Co., Limited, which were completely destroyed. The loss, however, was fully covered by insurance.

=The Beacon Falls Rubber Shoe Co. (Beacon Falls, Connecticut) were obliged during the latter days of August to close their factory, on account of a break in their engine machinery.

=The annual convention of the Carriage Builders' National Association will be held this year at Philadelphia, on October 2-7. In connection with the convention will be held the usual exhibition of carriages and accessories, at which the rubber tire trade is expected to be represented as usual.

=The Gorham Rubber Co. (San Francisco) are reported to be doing a good business in supplying hose designed specially for use in the California wineries.

=The plant of the People's Hard Rubber Co. (Akron, Ohio), which company was formed early in 1901 and ceased operations in November, 1902, has been purchased by the Twentieth Century Co., of Akron, who will erect additional buildings and devote the plant to the manufacture of heating and ventilating outfits. The property of the People's company was sold at auction by the assignee on March 16, 1903, to Fritz Achelis, president of the American Hard Rubber Co., since which time no use has been made of it.

=Edred W. Clark, machinist, of Hartford, Connecticut, whose foundry was mentioned in the last INDIA RUBBER WORLD as having been destroyed by fire, announces that he is preparing to resume business, and expects to have new works in operation early in this month. For a number of years he has been a manufacturer of rubber molds and presses and tubing machines. He has saved his patterns and will be pleased to hear from all his old customers as well as add others to the list.

=Mr. A. D. Thornton, general superintendent of The Canadian Rubber Co. of Montreal, Limited, left on August 24 for a two months' vacation in Europe, intending to visit London, Paris, Antwerp, and other centers of interest in the rubber trade.

=Powers Rubber Horseshoe Co., mentioned in the last issue of this Journal, have completed their organization by the election of Oscar Lund president and R. D. Buckingham secretary and treasurer, with offices at No. 125 Indiana street, Chicago. The company are capitalized at \$50,000 and all the patents have been purchased of the Powers rubber horseshoe. The heel in this shoe is of solid rubber and the rim of rubbered fiber, with a view to protecting the horse either on dry or wet pavement.

=Mr. Walter De Forest Brown, secretary of the National India Rubber Co., during the month visited Baltimore and several other cities for the purpose of auditing the accounts of the company's agencies in those cities.

=Regarding a newspaper report of the formation of the Newhall-Upham Co. (Lynn, Massachusetts) to do business in horseshoe pads, that company advises THE INDIA RUBBER WORLD that rubber pads are not meant.

=Mr. W. W. Wallis, Milwaukee manager of the Goodyear Rubber Co., was one of the eighty members of the Merchants' and Manufacturers' Association of that city who started August 6 on a six days' excursion over the Chicago and Northwestern railway, through the upper Michigan peninsula, for combined purposes of business and pleasure.

=Mr. Chester J. Pike, selling agent for the Hood Rubber Co., returned to Boston during the month from a business trip to the Pacific Coast.

=The Aiton Machine Co. (No. 126 Liberty street, New York) have just issued a bulletin illustrating one of their cabling and armoring machines used for the manufacture of concentric cables of bare or insulated iron, steel or copper wire and for armoring purposes. Specifications and quotations will be cheerfully furnished upon application at the New York office of the company.

=Tenders are invited up to September 7 at Washington for supplies for the Isthmian canal, including "rubber goods." Inquiry at the office of administration reveals that the requirements in rubber are 300 feet of 1 inch hose, 4 ply, wire bound, 50 inch sections, fitted with standard couplings.

=A newspaper of Akron, Ohio, mentions that the proprietor of a local bowling alley is experimenting with hard rubber pins, the success attained with hard rubber balls indicating that the same material may prove better than wood for pins.

=The directors of the Rubber Goods Manufacturing Co. have declared the twenty-sixth regular quarterly dividend of 1¼ per cent. on the preferred shares of the company, out of earnings, payable on September 15 to shareholders of record at the close of business on September 5. Checks will be mailed to registered addresses.

=The Falcon Rubber Co. (New Haven, Connecticut) have been undergoing a reorganization, following the resignation of C. E. Longden as superintendent and Dennis B. Martin as head of the sales department. It has been understood that Adam Best, formerly connected with the Newton Rubber Works, will succeed Mr. Longden. The Falcon Rubber Co. was incorporated February 29 1904, with \$60,000 capital authorized and has been at work since September last until within a few weeks manufacturing druggists' sundries.

=The factory of the Joseph Banigan Rubber Co. resumed work on August 21 after a summer shutdown of one week.

=The tennis shoe department of the National India Rubber Co. (Bristol, Rhode Island) was closed on August 26 for a period which it was reported would last 10 days.

=The two factories of the Woonsocket Rubber Co. resumed work on August 22, after the usual summer shutdown.

=At the fourth annual meeting of the National Cycle Association, held at the Astor House, July 25-26, Mr. J. W. Bowman, of The Fisk Rubber Co. (Chicopee Falls, Massachusetts), was one of the committee appointed to report on the advisability of restricted prices and the formation of an association of manufacturers.

=The Sibley Sandstone Brick Co. (Sibley, Michigan) is reported to have a contract to supply 2,500,000 brick to be used in the construction of the factory of Morgan & Wright, at Detroit.

=Beginning with the middle of August the factories of the I. B. Kleinert Rubber Co. (College Point, New York) closed for two weeks for the making of needed repairs and the installation of an electric power plant.

=The B. F. Goodrich Co. (Akron, Ohio) are reported to have purchased, in conjunction with the Young Women's Christian Association, a \$10,000 residence property in Akron for the purpose of providing a factory girls' home.

=The American Hard Rubber Co. are reported to be installing a new system of water mains for fire purposes at their factory at College Point, New York. The old gas holders from which the village was supplied by gas prior to the consolidation with New York city will serve as reservoirs, the water being derived from artesian wells.

=Dickinson Hard Rubber Co. (Springfield, Massachusetts) on August 3 made an assignment for the benefit of creditors to Robert C. Cooley, a lawyer of Springfield. The company have not been engaged in manufacturing rubber goods for several years, but made a specialty of buttons made of a compound. Carl D. Stickney is president and P. M. Taylor treasurer. The capital stock is \$40,000. It is stated that certain mortgages interfered with the conversion of the profits into assets. The business will be continued for the present by the assignee. The liabilities are stated at \$62,282.04 and the assets at \$43,079.21.

=Merchants' Rubber Co.—William Morse, president (New York), who were burned out in March last, have returned to their former quarters, No. 139 Duane street, after having been temporarily installed on the opposite side of the street.

=The two factories of the Boston Rubber Shoe Co. resumed work on August 13, after the summer shutdown. It is understood that the ticket is the same as when the shops closed, about three-quarters time.

=The fire brigade of the Hood Rubber Co. did good work on the afternoon of August 11, in connection with the town fire department, in putting out a fire which, without the prompt attention it received, might have caused much damage. As it was, the loss did not exceed \$1500, and was covered by insurance.

=The annual shutdown of the factory of L. Candee & Co. (New Haven, Connecticut) began with the close of the week ending August 19, and, it is reported, will continue six weeks.

=William Hodgkinson, whose resignation as superintendent of the National India Rubber Co. was reported in these pages on July 1, has been appointed as superintendent of manufacturing by the Electric Hose and Rubber Co. (Wilmington, Delaware), and entered upon his new post. Mr. Hodgkinson was connected with the National India-Rubber Co. for 12 years.

=For many years a member of the Conant Rubber Co., Mr. Herbert I. Conant has definitely abandoned the manufacture of rubber goods and gone into insurance. He now represents the New York Life Insurance Co., with an office at No. 60 State street, Boston, to which address all of his friends are cordially bidden.

=Charles A. Emerson, purchasing agent of the United States Rubber Co., might properly be classed among the great American travelers. Every week he spends three days at the New York offices of the company, and the rest of the time is devoted to visiting its factories. He visits most of the mills, in New England at least, every week. Purchasing supplies for eight or ten factories, each with a daily output of from 15,000 to 50,000 pairs of rubber footwear, might be called a fairly important position, without the additional effort involved in travel.

#### THE CINCINNATI RUBBER MANUFACTURING CO.

THIS new company reports greater progress than had been expected, the buildings having been practically completed, the Whitman & Barnes plant at Akron dismantled, and much of the machinery in place in the new location. It is now expected that the factory will be at least in partial operation before the middle of this month. Manager W. G. Brown says: "We propose to confine our operations just as largely to the jobbing interests in connection with large concerns as possible, keeping away from the small trade and allowing our jobbing connections to handle them. We have an admirable location, the best of shipping facilities, a good steady labor market, and there is no reason why the Cincinnati Rubber Manufacturing Co. should not show the same degree of progress as have several of the older companies that are to day without an equal.

#### PERSONAL MENTION.

THE Hon. L. D. Apsley, president of the Apsley Rubber Co. (Hudson, Massachusetts), during his recent vacation at Swampscott, Mass., won a reputation as an expert angler.

=Mr. Frederick T. Ryder, assistant general manager of the Boston Rubber Shoe Co., has been spending his summer vacation on Lake Sunapee, in New Hampshire.

=Mr. R. L. Chipman of the firm of George A. Alden & Co. (Boston) is constantly reaping honors in golf. One of his latest triumphs was the winning of the first prize at the Invitation Tournament between the Hatherly and Allston Golf Clubs. There were 52 starters, Chipman's net score being 72.

=Mr. R. H. Pease, of the Goodyear Rubber Co. (San Francisco and Portland), accompanied by his wife and son, R. H. Pease, Jr., have been spending the summer months in Portland, as has been their custom for several years. The daughter of the family, a favorite in Portland society, having been married recently, is spending the season abroad.



## REVIEW OF THE CRUDE RUBBER MARKET.

**W**HILE the prices printed below are unchanged since our last report in respect to some important grades, a number of changes will be noted, both of advance and decline, but on the average the market is higher than last month and decidedly firm. Reports reach New York of speculative buying for European account, particularly at Manáos and at Antwerp. At any rate stocks are smaller at the first named point and the unusually large offerings at Antwerp at the last monthly sale were absorbed, with the exception of the less desirable lots, at an advance over former quotations. The quotations below show an advance on Africans almost without exception, while some of the Central grades are lower. For some time past Africans have failed to keep pace with Pará sorts in the matter of advancement; It would appear now that a new condition exists.

There is a continued rise of Brazilian exchange which, after having remained at an average of 12 pence for two or three years, is now between 17 and 18 pence per milreis. This is regarded in the trade as an additional factor in the raising of rubber prices, since the Brazilian currency price has been practically without change for some time past.

Arrivals at Pará for the first 28 days of August were 1030 tons, against 1260 tons for the whole month of August last year. But as July showed larger arrivals by 200 tons than in the same month of 1904, the total figures for the crop year thus far are a little larger than usual. The increased arrivals at Pará evidently are due to larger receipts from the regions beyond Manáos, in Peru and the Acre.

Messrs. Hecht, Levis & Kahn (London) have brought out their annual statistics, which permit the following comparison to be made of their figures for the approximate world's production and consumption of rubber for several years past. Absolute accuracy in such cases is of course, out of question, but without doubt the world is producing more rubber than at any former period, under the stimulation of high prices, and more rubber is going into consumption which on the other hand tends to keep up prices. The London firm's tables also relate to the total visible supply of rubber at the end of each year (June 30), as follows:

## New York Stock Exchange Transactions.

## UNITED STATES RUBBER CO.:

DATES.	COMMON.			PRICES.		
	Sales.	High.	Low.	Sales.	High.	Low.
Week ending July 22	1,715	41½	43	9,921	113½	110½
Week ending July 29	1,750	52½	47	2,800	112	109½
Week ending Aug. 5	1,200	52½	51	1,810	111	109½
Week ending Aug. 12	2,220	52	51	1,300	111	109½
Week ending Aug. 19	15,775	55	51½	2,320	111½	110½
Week ending Aug. 26	7,790	53½	51½	400	111	110

## RUBBER Goods Manufacturing Co.:

DATES.	COMMON.			PRICES.		
	Sales.	High.	Low.	Sales.	High.	Low.
Week ending July 22	900	31½	34	300	111	114
Week ending July 29	800	35½	34	—	—	—
Week ending Aug. 5	420	35½	35	—	—	—
Week ending Aug. 12	500	35	35	—	—	—
Week ending Aug. 19	600	35	31½	300	111	105
Week ending Aug. 26	300	35	31½	—	—	—

SEASON.	Production.	Consumption.	Visible Supply *
1904-05 .....	68,879	65,083	4,584
1903-04 .....	61,759	59,606	4,388
1902-03 .....	55,603	55,276	5,053
1901-02 .....	53,603	51,170	6,816
1900-01 .....	52,864	51,136	6,411
1899-00 .....	53,348	48,352	7,569
1898-99 .....	52,192	48,783	4,871

[\*Including cargoes afloat.]

Following is a statement of prices of Pará grades, one year ago, one month ago, and on August 31—the current date:

PARÁ.	September 1, '04.	August 1, '05.	August 31.
Islands, fine, new...	116@117	125@126	125@126
Islands, fine, old.....	none here	none here	none here
Upriver, fine, new.....	120@121	127@128	128@129
Upriver, fine, old.....	122@123	129@130	131@132
Islands, coarse, new.....	66@67	67@68	70@71
Islands, coarse, old.....	none here	none here	none here
Upriver, coarse, new.....	91@92	90@91	90@91
Upriver, coarse, old.....	none here	none here	none here
Caucho (Peruvian) sheet.....	68@69	70@71	71@72
Caucho (Peruvian) ball.....	77@78	80@81	84@85

African sorts at New York show an advance, almost without exception:

AFRICAN.		CENTRALS.	
Sierra Leone, 1st quality	99@100	Esmeralda, sausage...	80 @81
Massai, red.....	99@100	Guayaquil, strip.....	71 @72
Benguella.....	78@86	Nicaragua, scrap...	78 @79
Cameroon ball.....	67@68	Panama, slab.....	62 @63
Accra flake.....	25@26	Mexican, scrap.....	80 @81
Lopori ball, prime....	108@109	Mexican, slab.....	57 @58
Lopori strip, prime....	91@92	Mangabeira, sheet....	71 @72
Madagascar, pinky....	89@90	EAST INDIAN.	
Ikelemba.....	109@110	Assam.....	97 @98
		Borneo.....	43 @44

## Late Pará cables quote:

Per Kilo.		Per Kilo.	
Islands, fine.....	5\$250	Upriver, fine.....	6\$250
Islands, coarse.....	2\$250	Upriver, coarse.....	4\$150

Exchange, 17½ d.

## Last Manáos advices:

Upriver, fine.....	6\$100	Upriver, coarse.....	3\$600
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Exchange, 17½ d.

## NEW YORK RUBBER PRICES FOR JULY (NEW RUBBER).

	1905.	1904.	1903.
Upriver, fine.....	1.28@1.31	1.12@1.19	94 @96
Upriver, coarse.....	90@95	87@91	74 @76
Islands, fine.....	1.25@1.28	1.00@1.15	80 @92
Islands, coarse.....	68@71	63@66	56 @58
Cametá.....	71@76	64@66	58 @60

In regard to the financial situation, Albert B. Beers (broker in India-rubber, No. 68 William street, New York) advises us as follows: "The money market has continued easy during August, with a fair demand for rubber paper, the best names being taken at 4 @ 5 per cent. and those not so well known at 5½ @ 6 per cent."

## Statistics of Para Rubber (Excluding Caucho).

	NEW YORK.		Total 1905.	Total 1904.	Total 1903.
	Fine and Medium.	Coarse.			
Stocks, June 30.....	395	199 =	594	137	367
Arrivals, July.....	111	186 =	297	478	942
Aggregating.....	506	385 =	891	615	1309
Deliveries, July.....	214	260 =	474	549	1085
Stocks, July 31.....	292	125 =	417	66	224

	PARÁ.			ENGLAND.		
	1905.	1904.	1903.	1905.	1904.	1903.
Stocks, June 30 ... tons	160	175	115	485	565	1320
Arrivals, July, .....	1420	1010	1050	580	595	330
Aggregating.....	1880	1185	1165	1065	1180	1150
Deliveries, July....	1340	870	1030	675	745	675
Stocks, July 31....	240	315	135	390	435	975

	1905.	1904.	1903.
World's visible supply, July 31..... tons	1741	1281	2088
Pará receipts, July 1 to July 31.....	1420	1010	1050
Pará receipts of Caucho, same dates.....	170	230	230
Afloat from Pará to United States, July 31....	94	166	394
Afloat from Pará to Europe, July 31.....	600	241	360

### Nicaragua.

EXPORTS of rubber from Bluefields for three years—values in gold. [From *The American*, of Bluefields, July 27, 1905.]

QUARTER ENDING—	Value.
September 30, 1902 .....	\$25,666 74
December 31, 1902 .....	34,790 80
March 31, 1903.....	50,038.90
June 30, 1903 .....	47,033.45
September 30, 1903.....	\$31,913.28
December 31, 1903.....	44,469.70
March 31, 1904.....	61,694 40
June 30, 1904.....	63,584.40
September 30, 1904.....	\$38,407.94
December 31, 1904.....	65,527.07
March 31, 1905.....	102,277 80
June 30, 1905.....	74,396 38

### United States Crude Rubber Imports.

OFFICIAL STATEMENT—BY FISCAL YEARS.

FROM—	1902-03.	1903-04.	1904-
United Kingdom. ....pounds	9,714,597	7,711,910	10,024,654
Germany.....	2,916,814	2,458,568	3,714,597
Other Europe. ....	8,078,629	11,206,204	10,831,234
Central America.....	1,083,351	1,264,210	1,430,255
Mexico.....	251,776	366,104	352 690
West Indies and Bermuda....	15,609	17,910	4,328
Brazil.....	31,119,486	33,109,112	36,593,555
Other South America.....	1,363,832	1,794,492	2,117,093
East Indies .....	454,594	1,084,689	2,112,872
Other Countries.....	11,883	2,292	52,978
Total .....	55,010,571	59,015,551	67,234,256
Value.....	\$30,436,710	\$40,444 250	\$49,878,366
Average per pound.....	55.3 cents.	68.5 cents.	74.2 cents.

EXPORTS of rubber. ....	2,911,538	3,942,002	3,262,884
Net Imports..... tons	52,099,033	55,073,549	63,971 362

### Antwerp.

THE monthly inscription sale, on August 23, was unusually large, about 780 tons being exposed, and the greater part finding buyers, at prices higher on the average than the brokers' estimations. The more important lots, with the estimations (in francs per kilogram) were:

### Rubber Scrap Prices.

NEW YORK quotations—prices paid by consumers for carload lots, in cents per pound—show a general increase over last month's figures, as follows:

Old Rubber Boots and Shoes—Domestic.....	6 3/4 @ 7
Do —Foreign.....	6 @ 6 1/2
Pneumatic Bicycle Tires.....	5 @ 5 1/4
Solid Rubber Wagon and Carriage Tires.....	6 1/2 @ 6 3/4
White Trimmed Rubber.....	8 1/2 @ 8 3/4
Heavy Black Rubber.....	4 3/8 @ 4 3/4
Air Brake Hose.....	3 @ 3 1/4
Fire and Large Hose.....	2 5/8 @ 2 3/4
Garden Hose.....	1 7/8 @ 2
Matting.....	3 1/4 @ 1

41 tons Upper Congo balls.....	francs 11.25
46 " Uele strips.....	7 1/2
48 " Kasai Loanda Sankuru .....	7 1/2
26 " Kasai Loanda Sankuru.....	7 1/2
55 " Aruwimi pieces.....	8.70
87 " Aruwimi pieces.....	8.50
25 " Congo Djuma.....	7.15
23 " Maringa (Upper Congo) very sticky .....	6.25

### ANTWERP RUBBER STATISTICS FOR JUNE.

DETAILS.	1905.	1904.	1903.	1902.	1901.
Stocks, May 31.....	347,104	742,218	442,592	464,675	825,442
Arrivals in June....	540,911	271,334	509,222	297,949	537,799
Congo sorts.....	1,111	1,111	436,868	1,111	517,896
Other sorts .....	87,493	82,034	72,354	30,023	19,993
Aggregating....	888,015	1,013,549	851,814	762,624	1,363,241
Sales in June .....	305,029	324,034	303,115	80,954	408,662
Stocks, June 30..	582,986	689,515	487,777	681,670	954,579
Arrivals since Jan. 31	2,761,199	2,825,760	2,613,926	2,644,808	3,081,392
Congo sorts .....	2,211,777	2,114,422	1,111	2,456,254	2,711,344
Other sorts .....	50,112	508,328	1,111	188,554	29,048
Sales since Jan. 1 ..	2,719,574	2,747,115	2,784,032	2,377,847	2,740,852

### ANTWERP RUBBER STATISTICS FOR JULY.

DETAILS.	1905.	1904.	1903.	1902.	1901.
Stocks, July 31.....	582,986	689,515	487,777	681,670	954,579
Arrivals in July....	449,085	639,157	365,406	592,836	470,662
Congo sorts .....	324,963	530,159	324,060	545,222	470,662
Other sorts .....	124,122	108,998	111,346	147,614	12,000
Aggregating....	1,032,071	1,328,672	853,405	1,274,566	1,425,241
Sales in July.....	212,512	455,926	475,577	594,734	384,800
Stocks, July 31....	819,559	872,746	377,527	689,772	1,040,441
Arrivals since Jan. 1	3,210,284	3,194,917	2,979,332	3,237,644	3,552,054
Congo sorts .....	2,536,030	2,847,591	2,649,192	3,001,476	3,243,557
Other sorts .....	674,254	617,326	330,140	236,168	308,497
Sales since Jan. 1 ..	2,932,086	3,203,071	3,259,910	2,962,581	3,125,652

### RUBBER ARRIVALS AT ANTWERP.

AUGUST 9.—By the *Anversville*, from the Congo:

Bunge & Co. ....(Société Générale Africaine) kilos.	127,000
Do .....	(Chemins de fer Grand Lacs) 12,000
Do .....	(Société "La Kotto") 3,300
Do .....	(Sultanats du Haut Ubangi) 26,000
Do .....	(Comité Spécial Katanga) 14,000
Société Coloniale Anversoise.(Belge du Haut Congo)	8,400
Do .....	(Sud Kamerun) 5,300
Do .....	1,300
L & W. Van de Velde.....(Cie. du Kasai)	40,000
Comptoir des Produits Coloniaux..(Société "N'Goko")	
Do .....	Sangha) 1,800
M. S. Cols. ....	(Alima) 3,700
Edmund Van Steensel....(Cie. Bruxelloise du Haut	
Do .....	(Congo) 500
Société Generale de Commerce.....(Alimaienne)	1,200
Cie Commerciale des Colonies.....	4,500
Société Equatoriale Congolaise...(Société l'Ikelemba)	1,800 250,800

### Liverpool.

WILLIAM WRIGHT & Co. report [August 1]:

*Fine Para*—During the greater part of the month the demand was dull, and prices reacted 1 3/4d per pound. Within the last week a better trade demand has been experienced and prices have recovered 1d., the market closing firm at the advance. In the present statistical position any demand from the trade is bound to stiffen prices, and we anticipate next month a further rise, but a good deal depends on the action of American manufacturers.

EDMUND SCHLÜTER & Co. report [July 31]:

The tendency of the moment is in favor of increased value and an advance would be in keeping with the rise that has for a number of years past invariably taken place during the summer. The crop movement during this season began early, and receipts during the first half of the



month were large. It was and is expected that the total crop will be as large as its predecessor, but the second half of July showed delay of arrivals. Available supplies at the consuming markets show the usual decrease, and any further delay in the crop movement would not remain without an immediate effect on prices. Any advance would be accentuated should America become a buyer in the near future.

The world's visible supply of Pará grades on July 31 was:

Tons.....	2372	1665	2550	3334	2650
Prices, hard cure.....	5 11 1/4	4 11 1/4	4 0 1/2	2 11 1/4	3/7

#### LONDON STOCKS OF AFRICAN RUBBER, JULY 31.

1905.....	371	1902.....	516	1899.....	479
1904.....	473	1901.....	728	1897.....	376
1903.....	371	1900.....	823	1896.....	431

#### London.

EDWARD TILL & Co. report stocks [August 1]:

	1905.	1904.	1903.
Pará sorts..... tons	—	—	—
Borneo.....	38	54	23
Assam and Rangoon.....	21	20	11
Penang.....	335	—	—
Other sorts.....	213	131	176
Total.....	607	405	210
Pará.....	389	434	981
Caucho.....	218	323	222
Other sorts.....	514	602	368
Total, United Kingdom.....	1728	1764	1781
Total, July 1.....	1750	1920	5285
Total, June 1.....	1644	1667	2248
Total, May 1.....	1415	1644	2539
Total, April 1.....	1232	1367	2525

#### PRICES PAID DURING JULY.

	1905.	1904.	1903.
Pará fine, hard..	5/7 @ 5/4 1/4 4/9 1/4 @ 4/11 3/11 6/4 0 1/2		
Do soft.....	5 5 1/4 @ 5 3 1/4 4 8 1/4 10 3 1/10 @ 3/11		
Negroheads, scrappy.....	3 11 1/2 @ 3 9 3 7 1/2 @ 3 3 1/2 3 1 1/2 @ 3 1 1/4		
Do Cametá.....	3/2 @ 3/1 2/7 1/2 @ 2/8 3/2 @ 2/6 1/2		
Bolivian.....	5 7 @ 5 4 1/2 4 11 1/4 @ 4 11 3/4 4 1 1/2 for old		
Caucho, ball.....	3/5 1/4 @ 3/4 1/2 3/3 @ 3/5 3/ @ 3/1		
Do slab.....	2 11 @ 2 9 1/2 2/10 2/5 1/2 @ 2/6		
Do tails.....	No sales	No sales	No sales

#### AUCTION SALES REPORT.

AUGUST 18.—The market for Pará has ruled firm and there has been rather more activity, a good business having been done at full to dearer prices. Fine hard spot and near, which have been scarce, have been sold at 5. 6 3/4 d. @ 5s. 7 d. September-October delivery 5s. 1 1/2 d. @ 5s. 6 d.; and October-November 5s. 5 1/4 d. At auction to date moderate supplies were brought forward which met a good demand, and a good part sold at firm to rather better prices. Colombian good strong brown scrap at 3s. 10 1/2 d., rather rough and dirty ditto at 3s. 3 d. Cartagena scrap, rather weak and soft, 3s. 4 d. Good Ecuador scrap at 3s. 7 3/4 d. Madagascar fine clean white 4s. 3 d.; good pinky mixed white and spongy at 3s. 7 1/2 d. Mixed Malanga at 2s. 10 d. 3s. 3 d. Mozambique good clean red ball 4s. 3 1/4 d. Good Lamu ball at 3s. 7 1/2 d.

#### PLANTATION RUBBER.

July 21 Auction.—Ceylon and Straits Pará rubber: 80 packages offered and 56 sold; good to fine Ceylon biscuits at 6s. 1 1/2 d. @ 6s. 3 d. and dirty 4s. @ 4s. 11 1/2 d. Straits: Good sheet, 6s. 2 3/4 d.; good biscuits, 6s. 1 1/2 d. @ 6s. 2 1/4 d.; good scrap, 5s. 3 d.; mixed part white and softish, 4s. @ 4s. 7 d. Rambong (*Ficus elastica* rubber): Pressed clean black slab at 4s. 0 1/4 d.; ditto heated at 3s. 6 1/4 d. [Sales of fine hard cure rubber from Pará on spot at 5s. 5 d. = \$1.31 3/4.]

July 28—No Auction.—Small sales plantation grown "worm" at 6s. 3 d. and "crepe" at 6s. 3 d. value.

July 28—No Auction.—Ceylon and Straits Pará rubber: 80 packages offered, [= \$1.52]; good to fine pale scrap, 5s.

1d. @ 5s. 5 d.; mixed chiefly dark 26 sold; fine pale sheet at 6s. 3 d. [= \$1.52]; dark rather immature at 6s. @ 6s. 1 d.; scrap at 4s. 9 d. @ 5s.; fine dark cuttings at 5s. 2 1/2 d. Rambong: Clean dark strips at 4s. 1 d. [Sales of fine hard cure from Pará on spot at 5s. 6 1/2 d. = \$1.34 3/4.]

August 11—No Auction.—Ceylon and Straits in demand at 6s. 3 d. but nothing offering privately below 6s. 5 d. [= \$1.56.]

August 18 Auction.—Fifty-nine packages Ceylon and Straits plantation sold. Fine pale thin biscuits and sheet at 6s. 3 d. [= \$1.52]; inferior biscuits, dull and moldy at 6s.; fine pale clean washed "worm" at 6s. 3 d.; fairly good scrap at 5s. @ 5s. 5 d.; mixed at 4s. 4 d.; inferior part badly heated at 3s. @ 3s. 3 d. [Sales of fine hard cure rubber from Pará at 5s. 7 d. [= \$1.35 1/2]]

#### Ceylon Exports (Plantation Rubber).

##### DETAILS—BY WEEKS.

	POUNDS.
January 1 to June 19.....	45,438
Week ending June 26.....	3,178
Week ending July 3.....	1,157
Week ending July 10.....	1,747
Week ending July 17.....	2,737
Week ending July 24.....	1,638
Total to July 24.....	55,895
Same period, 1904.....	40,233
Same period, 1903.....	25,344

##### DESTINATION.

Great Britain.....	40,573	United States.....	3,036
Germany.....	11,139	Australia.....	1,147

#### Bordeaux.

##### IMPORTATION OF CAOUTCHOUC.

MONTHS.	1903.	1904.	1905.
January..... kilos	66,864	54,550	130,255
February.....	95,007	169,025	126,540
March.....	119,582	94,615	173,355
April.....	97,641	121,560	152,650
May.....	104,065	91,125	74,700
June.....	63,473	65,060	77,100
Total..... kilos	546,665	595,935	734,600

#### Para.

KANTHACK & Co. report [August 1]:

Rubber.—The feeling of weakness, reflected by inactivity and lower values, seems to have spent itself, as lately the market has been characterized, by a somewhat firmer tone, ascribed to encouraging development in the consuming centers as well as to scarcity of supplies. It is worth mentioning that quite a number of small steamboats with a considerable quantity of last crop's rubber on board are still detained in the upper reaches of some rivers where they must remain a few months longer until the water rises sufficiently to permit navigation.

#### Rubber Receipts at Manaos.

DURING July—the first month of the crop year [courtesy of Messrs. Scholz & Co.]:

	1905.	1904.	1903.
Rio Purús—Acre..... tons	225	145	163
Rio Madeira.....	219	149	252
Rio Juruá.....	37	25	2
Rio Javary—Iquitos.....	90	25	14
Rio Solimões.....	11	4	10
Rio Negro.....	4	—	12
Total.....	586	348	453
Caucho.....	88	99	161
Total.....	674	447	614

#### Iquitos Rubber Exports—1904.

##### [FROM A BRITISH CONSULAR REPORT.]

GRADES.	U. States	England	Germany.	France.	Brazil.	Total.
Good rubber.....	30,219	303,450	62,746	232,727	109,073	740,625
Good (semanba).....	4,500	18,178	16,818	92,891	27,952	300,729
Good slab.....	86	27,268	1,331	18,967	5,314	52,066
Good ball.....	8,969	68,073	46,003	304,268	23,455	1,040,858
Good rubber.....	—	11,473	1,627	5,618	544	19,242
Total.....	52,214	1,158,742	128,615	654,531	166,318	2,160,420

## IMPORTS FROM PARA AT NEW YORK.

[The Figures Indicate Weights in Pounds.]

August 7.—By the steamer *Thomson*, from Pará.

IMPORTERS.	Fine.	Medium.	Coarse	Cauchó	Total.
New York Commercial Co.	26,900	3,100	21,800	.....	51,800
A. T. Morse & Co.	8,100	.....	42,300	15,200	65,600
Poel & Arnold	.....	.....	60,200	11,800	72,000
Hagemeyer & Brunn	11,500	.....	4,300	.....	15,800
Lionel Hagenaeers & Co.	6,000	.....	1,300	.....	7,300
<b>Total</b>	<b>52,500</b>	<b>3,100</b>	<b>129,900</b>	<b>27,000</b>	<b>212,500</b>

August 15.—By the steamer *Maranhense*, from Manáos and Pará:

New York Commercial Co.	129,100	32,000	64,000	1,800	226,900
Poel & Arnold	37,700	3,600	76,000	31,200	148,500
A. T. Morse & Co.	21,400	1,200	48,400	4,800	75,800

Thomson & Co.	11,200	.....	9,400	.....	20,600
Lionel Hagenaeers & Co.	11,200	.....	3,400	.....	14,600
Constantino P. San Tos.	3,200	300	2,500	.....	6,000

Total. . . . 222,500 37,100 204,700 37,800 = 502,100

August 25.—By the steamer *Gregory*, from Pará:

New York Commercial Co.	55,700	12,600	28,500	2,700	99,500
Poel & Arnold	2,300	.....	4,300	.....	6,600
Lionel Hagenaeers & Co.	7,800	1,000	5,600	.....	14,400
A. T. Morse & Co.	4,500	700	8,300	.....	13,500
Constantino P. Santos	9,100	700	2,300	.....	12,100
Hagemeyer & Brunn	12,000	.....	.....	.....	12,000
Edmund Reeks & Co.	.....	.....	7,000	.....	7,000

Total. . . . 92,000 15,000 92,600 2,700 = 202,300

[Note: The steamer *Deona* from Pará arrived at New York September with 75 tons Rubber.]

## PARA RUBBER VIA EUROPE.

JULY 31.—By the *Celtic*=Liverpool:

A. T. Morse & Co. (Coarse)	17,500
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JULY 31.—By the *Umbria*=Liverpool:

New York Commercial Co. (Fine)	22,000
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New York Commercial Co. (Coarse)	4,500
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AUG. 1.—By the *Celtic*=Liverpool:

A. T. Morse & Co. (Coarse)	21,000
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AUG. 3.—By the *Advance*=Mollendo:

Boston & Bolivia Co. (Fine)	9,000
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Boston & Bolivia Co. (Coarse)	2,500
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Finnt & Co. (Cauchó)	18,000
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AUG. 5.—By the *Lucania*=Liverpool:

Poel & Arnold (Cauchó)	11,000
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AUG. 10.—By the *Maraval*=Bolívar:

Thebaud Brothers (Fine)	34,000
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Thebaud Brothers (Coarse)	17,000
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Middleton & Co. (Coarse)	5,000
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AUG. 14.—By the *Cedric*=Liverpool:

Poel & Arnold (Fine)	29,500
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Poel & Arnold (Coarse)	25,000
------------------------	--------

Poel & Arnold (Cauchó)	13,500
------------------------	--------

AUG. 21.—By the *Finance*=Mollendo:

Boston & Bolivia Co. (Fine)	7,500
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A. D. Hitch & Co. (Fine)	1,000
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OTHER ARRIVALS AT NEW YORK.

## CENTRALS.

JULY 24.—By the *Tennison*=Bahia:

Hirsch & Kaiser	77,000
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J. H. Rosbach & Bros	20,000
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American Commercial Co.	19,000
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A. D. Hitch & Co.	3,000
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Lawrence Johnson & Co.	2,500
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JULY 25.—By the *Altai*=Colombia:

D. A. De Lima & Co.	1,500
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Lauman & Kemp	700
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J. Ferro	700
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Roldan Van Sickle	500
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Kunhardt & Co.	800
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Isaac Brandon & Bros	700
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A. A. Lindo & Co.	500
-------------------	-----

JULY 27.—By the *Patricia*=Hamburg:

Hirsch & Kaiser	3,300
-----------------	-------

JULY 29.—By the *Vigilancia*=Mexico:

Harburger & Stack	6,000
-------------------	-------

E. Steiger & Co.	1,500
------------------	-------

Fred. Probst & Co.	800
--------------------	-----

H. Marquardt & Co.	700
--------------------	-----

G. Amsinck & Co.	500
------------------	-----

European Option	22,000
-----------------	--------

JULY 31.—By the *St. Paul*=London:

Hirsch & Kaiser	22,500
-----------------	--------

AUG. 2.—By the *Sarnia*=Colombia:

Isaac Kuble & Co.	2,000
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Reveres & Co.	1,000
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E. B. Strout	1,000
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A. D. Straus & Co.	1,000
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Roldan & Van Sickle	500
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Pedro A. Lopez	500
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AUG. 3.—By the *Syracusa*=Bahia:

Hirsch & Kaiser	16,000
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AUG. 3.—By the *Advance*=Colon:

Hirzel, Feltman & Co.	8,500
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G. Amsinck & Co.	7,500
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Lawrence Johnson & Co.	4,500
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## CENTRALS—Continued.

OTTO Gerdaun	5,100
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Roldan & Van Sickle	3,500
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Dumarest Bros & Co.	3,100
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American Trading Co.	1,900
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Mann & Emdon	1,700
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A. M. Capen's Sons	500
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J. A. Medina & Co.	500
--------------------	-----

AUG. 5.—By the *Seneca*=Mexico:

Harburger & Stack	1,200
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Graham, Hinkley & Co.	1,000
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H. Marquardt & Co.	500
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European Option	2,000
-----------------	-------

AUG. 5.—By the *El Paso*=New Orleans:

A. T. Morse & Co.	4,000
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A. N. Rotholz	3,300
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AUG. 7.—By the *Comeous*=Bahia:

American Commercial Co.	16,000
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Hirsch & Kaiser	9,000
-----------------	-------

AUG. 8.—By the *Alleghany*=Colombia:

A. Held	2,000
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Kunhardt & Co.	1,800
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Isaac Brandon & Bros	500
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AUG. 8.—By the *Alliance*=Colon:

Piza, Nephews & Co.	2,700
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AUG. 8.—By the *San Marcos*=Mobile:

A. N. Rotholz	6,500
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A. T. Morse & Co.	1,500
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AUG. 11.—By the *Gere*=Honduras:

G. Amsinck & Co.	2,200
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A. N. Rotholz	800
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Eggers & Heinlein	800
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AUG. 12.—By the *Orizaba*=Mexico:

H. Marquardt & Co.	1,700
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Harburger & Stack	4,000
-------------------	-------

E. Steiger & Co.	1,000
------------------	-------

American Trading Co.	500
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AUG. 14.—By the *Martica*=Colon:

G. Amsinck & Co.	11,400
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Hirzel, Feltman & Co.	9,700
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J. A. Medina & Co.	4,900
--------------------	-------

Lawrence Johnson & Co.	2,800
------------------------	-------

A. Santos & Co.	2,700
-----------------	-------

Isaac Brandon & Bros	2,700
----------------------	-------

Roldan & Van Sickle	2,700
---------------------	-------

Mann & Emdon	2,200
--------------	-------

American Trading Co.	2,200
----------------------	-------

Dumarest Bros. & Co.	1,900
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Meyer Hecht	1,600
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A. M. Capen's Sons	1,500
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AUG. 15.—By the *Sibiria*=Colombia:

Banco de Exportasos	2,000
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Kunhardt & Co.	1,000
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D. A. De Lima & Co.	1,000
---------------------	-------

Lawrence Johnson & Co.	800
------------------------	-----

Lionel Hagenaeers & Co.	500
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AUG. 18.—By the *Bayamo*=Mexico:

Graham, Hinkley & Co.	1,100
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J. W. Wilson & Co.	1,000
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Fred. Probst & Co.	500
--------------------	-----

European Option	20,000
-----------------	--------

AUG. 14.—By the *Merida*=London:

General Rubber Co.	3,500
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AUG. 21.—By the *Byron*=Bahia:

Hirsch & Kaiser	31,000
-----------------	--------

American Commercial Co.	22,500
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Lawrence Johnson & Co.	3,000
------------------------	-------

A. D. Hitch & Co.	1,500
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Hamburg etc.	6,500
--------------	-------

	9,500
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AUG. 21.—By the *Patricia*=Colon:

Hirzel, Feltman & Co.	9,700
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Mann & Emdon	700
--------------	-----

Kunhardt & Co.	1,000
----------------	-------

AFRICANS.

JULY 27.—By the *Teutonic*=Liverpool:

Poel & Arnold	11,300
---------------	--------

George A. Alden & Co.	6,000
-----------------------	-------

General Rubber Co.	4,500
--------------------	-------

A. W. Brunn	5,500
-------------	-------

Robinson & Tallman	4,000
--------------------	-------

Wallace L. Gongh	1,700
------------------	-------

A. T. Morse & Co.	2,000
-------------------	-------

JULY 27.—By the *Patricia*=Hamburg:

A. T. Morse & Co.	47,000
-------------------	--------

George A. Alden & Co.	27,000
-----------------------	--------

Poel & Arnold	20,000
---------------	--------

Rubber Trading Co.	2,000
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JULY 31.—By the *Umbria*=Liverpool:

Henry A. Gould Co.	5,500
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A. T. Morse & Co.	2,500
-------------------	-------

JULY 31.—By the *Bluecher*=Hamburg:

A. T. Morse & Co.	11,000
-------------------	--------

AUG. 1.—By the *Finland*=Antwerp:

Poel & Arnold	30,000
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AUG. 2.—By the *Caronia*=Liverpool:

A. T. Morse & Co.	13,500
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George A. Alden & Co.	4,500
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AUG. 5.—By the *Lucania*=Liverpool:

George A. Alden & Co.	25,000
-----------------------	--------

Poel & Arnold	11,000
---------------	--------

AUG. 5.—By the *Bulgaria*=Hamburg:

A. T. Morse & Co.	1,500
-------------------	-------

Rubber Trading Co.	2,500
--------------------	-------

Poel & Arnold	2,500
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AUG. 8.—By the *Vaderland*=Antwerp:

George A. Alden & Co.	25,000
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## AFRICANS.—Continued.

July 1.—By the <i>Leopoldina</i> =Hamburg:	
A. T. Morse & Co.	3,000
Geo. A. Alden & Co.	38,000
Poel & Arnold.	18,000
A. W. Bruhn	30,000 122,000

## EAST INDIAN.

July 1.—By the <i>Athol</i> =Singapore:	
Poel & Arnold.	30,000
Winter & Smillie	2,000
Robert Brans & Co.	21,000 122,000

July 25.—By the <i>Messala</i> =London:	
George A. Alden & Co.	1,000
Heabler & Co.	1,500 8,500

July 31.—By the <i>Neidenfels</i> =Calcutta:	
Poel & Arnold	3,500

Aug. 8.—By the <i>Minnehaha</i> =London:	
George A. Alden & Co.	1,000

Aug. 9.—By the <i>Georgie</i> =Liverpool:	
Poel & Arnold	10,000

Aug. 14.—By the <i>Buccara</i> =Calcutta:	
Poel & Arnold	13,000
Rubber Trading Co.	1,500 14,500

Aug. 18.—By the <i>Baltic</i> =Liverpool:	
Poel & Arnold	7,500

Aug. 21.—By the <i>Sagami</i> =Singapore:	
Pierre T. Betts	53,070
Robert Brans & Co.	25,000
Poel & Arnold	13,500
George A. Alden & Co.	11,500 103,000

Aug. 22.—By the <i>Messala</i> =London:	
George A. Alden & Co.	5,000

## GUTTA-JELUTONG

July 24.—By the <i>Athol</i> =Singapore:	
Heabler & Co.	25,000
Windmuller & Reolker	185,000
Robert Brans & Co.	1,000
George A. Alden & Co.	110,000
Wallace L. Gough	55,000 700,000

## EAST INDIAN.—Continued.

AUG. 18.—By the *Nubia*=Singapore:

Russell & Vandenham	135,000
Pierre T. Betts	170,000
Heabler & Co.	15,000
Windmuller & Reolker	9,000 430,000

AUG. 21.—By the *Sagami*=Singapore:

Pierre T. Betts	255,000
Robert Brans & Co.	150,000
Heabler & Co.	150,000
George A. Alden & Co.	80,000
Poel & Arnold	30,000
Robertson & Faltman	13,000
Winter & Smillie	135,000 1,055,000

## GUTTA-PERCHA AND BALATA.

July 27.—By the <i>Patocua</i> =Hamburg:	
To Order	6,000

July 31.—By the <i>St. Paul</i> =London:	
Wallace L. Gough	11,000

Aug. 14.—By the <i>Minnehaha</i> =London:	
Wallace L. Gough	5,500

Aug. 18.—By the <i>Baltica</i> =Hamburg:	
To Order	6,500

Aug. 21.—By the <i>Sagami</i> =Singapore:	
Winter & Smillie	25,000
George A. Alden & Co.	2,500 27,500

Aug. 24.—By the <i>Pennsylvania</i> =Hamburg:	
To Order	7,000

## BALATA.

Aug. 7.—By the <i>Parana</i> =Demerara:	
Charles P. Shulstone	4,500
Mallard, Coppel Co.	3,000
G. Amick & Co.	1,500 9,000

Aug. 10.—By the <i>Maraval</i> =Cuidad Bolivar:	
Frame & Co.	8,000

## CUSTOM HOUSE STATISTICS.

Imports:	POUNDS.	VALUE.
India rubber	2,333,309	\$1,511,372
Gutta percha	51,388	21,967
Gutta jelutong (Pontianak)	3,965,068	117,700
Total	6,294,345	\$1,651,039

Exports:		
India rubber	38,582	\$7,419
Reclaimed rubber	288,358	30,564
Rubber Scrap Imported	1,605,728	\$100,279

## BOSTON ARRIVALS.

	POUNDS.
July 1.—By the <i>Barcelona</i> =Hamburg:	
George A. Alden & Co.—African	44,103

July 7.—By the <i>Sphynx</i> =Liverpool:	
George A. Alden & Co.—African	3,430

July 11.—By the <i>Cestrian</i> =Liverpool:	
George A. Alden & Co.—African	1,874
Poel & Arnold—African	2,222 4,096

July 14.—By the <i>Sagami</i> =Liverpool:	
J. E. Odell—African	2,318

July 25.—By the <i>Leather Cast</i> =Singapore:	
George A. Alden & Co.—East Indian	5,917

July 25.—By the <i>Abessinia</i> =Hamburg:	
Poel & Arnold—African	11,159

July 28.—By the <i>Canadian</i> =Liverpool:	
George A. Alden & Co.—African	45,461

July 28.—By the <i>Ebenian</i> =Antwerp:	
Poel & Arnold—African	10,617

July 28.—By the <i>Abessinia</i> =Hamburg:	
George A. Alden & Co.—African	1,962

Total	129,063
[Value, \$74,641.]	

## OFFICIAL STATISTICS OF CRUDE INDIA-RUBBER (IN POUNDS).

## UNITED STATES.

MONTHS.	IMPORTS.	EXPORTS.	NET IMPORTS.
June, 1905	3,609,260	220,104	3,389,156
January-May	30,438,836	1,353,920	31,781,916
Six months, 1905	34,048,096	1,571,034	32,477,062
Six months, 1904	34,491,123	1,700,496	32,790,627
Six months, 1903	28,828,704	1,507,618	27,321,086

## GERMANY.

MONTHS.	IMPORTS.	EXPORTS.	NET IMPORTS.
June, 1905	3,817,146	1,28,200	2,538,946
January-May	18,257,980	6,113,580	12,144,400
Six months, 1905	22,835,120	7,391,840	15,443,280
Six months, 1904	18,294,760	5,233,880	13,060,880
Six months, 1903	18,357,240	6,086,020	12,271,220

## FRANCE.\*

MONTHS.	IMPORTS.	EXPORTS.	NET IMPORTS.
June, 1905	2,211,270	1,137,740	1,073,530
January-May	12,338,720	6,774,880	5,563,840
Six months, 1905	14,550,000	7,912,620	6,637,380
Six months, 1904	10,778,820	5,700,200	5,078,620
Six months, 1903	8,324,800	4,609,880	3,714,920

## BELGIUM

MONTHS.	IMPORTS.	EXPORTS.	NET IMPORTS.
June, 1905	7,351,720	5,718,800	1,632,920
January-May	7,351,720	5,718,800	1,632,920
Six months, 1905	7,351,720	5,718,800	1,632,920
Six months, 1904	7,351,720	5,718,800	1,632,920
Six months, 1903	7,351,720	5,718,800	1,632,920

## GREAT BRITAIN.

MONTHS.	IMPORTS.	EXPORTS.	NET IMPORTS.
June, 1905	4,822,496	2,600,800	2,221,696
January-May	27,856,192	15,425,880	12,430,312
Six months, 1905	32,678,688	18,032,680	14,646,008
Six months, 1904	30,000,872	17,540,662	12,460,210
Six months, 1903	20,328,268	10,415,872	9,912,396

## ITALY

MONTHS.	IMPORTS.	EXPORTS.	NET IMPORTS.
June, 1905	120,780	1,540	119,240
January-May	733,920	117,040	616,880
Six months, 1905	854,700	118,580	736,120
Six months, 1904	841,720	52,140	789,580
Six months, 1903	890,360	91,380	798,980

## AUSTRIA-HUNGARY.

MONTHS.	IMPORTS.	EXPORTS.	NET IMPORTS.
June, 1905	251,680	3,740	247,940
January-May	1,318,680	12,540	1,306,140
Six months, 1905	1,570,360	16,280	1,554,080
Six months, 1904	1,841,320	10,340	1,830,980
Six months, 1903	1,504,580	12,320	1,492,260

NOTE.—German statistics include Gutta-percha, Balata, old rubber, and substitutes. French, Austrian, and Italian figures include Gutta-percha. The exports from the United States embrace the supplies for Canadian consumption.

\* General Commerce

† Special Commerce.

WILLIAM T. BAIRD, PRESIDENT

ROBERT B. BAIRD, VICE PRESIDENT

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WHITE AND BLUE LEAD

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RECLAIMED RUBBER**



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MANUFACTURERS OF

**Pure Reclaimed Rubber**

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## Zinc Oxide

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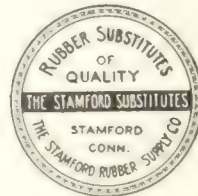
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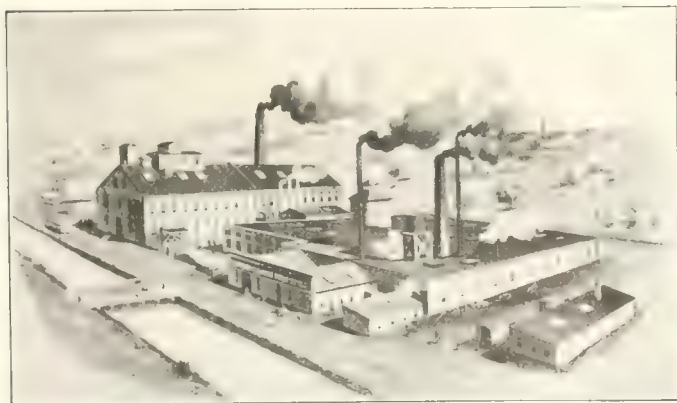
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Prevents NOISE  
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SAMPLES FREE

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Satisfactory Tyres.

The "Auto-Arg" the great English authority referring to CLINCHER TYRES, says

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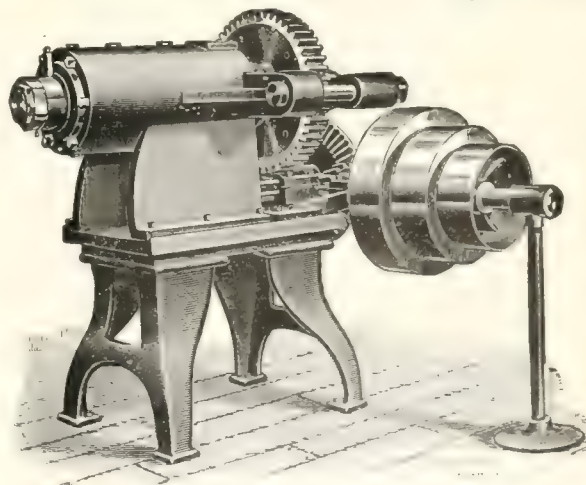
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**THE NORTH BRITISH RUBBER CO., Ltd.,**  
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## CLARK'S Reliable Tubing Machine

FOR THE MANUFACTURE OF RUBBER TUBING AND CORD,  
And also the Covering of Electrical and Telephone Cables.



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*Mention the India Rubber World when you write.*



## AITON MACHINE COMPANY

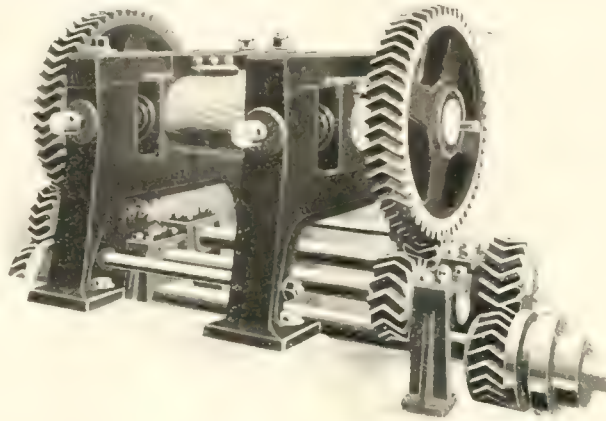
GARDINER C. SIMS, President

THOS. A. AITON, Vice President

ARTHUR S. BEVES, Secretary and Treasurer

126 LIBERTY STREET  
NEW YORK

Factory: HARRISON, N. J.



OUR DOUBLE GEARED WASHER FOR EXTRA HARD STOCK.

## RUBBER MILL MACHINERY

Dryers—Hot Air and Vacuum

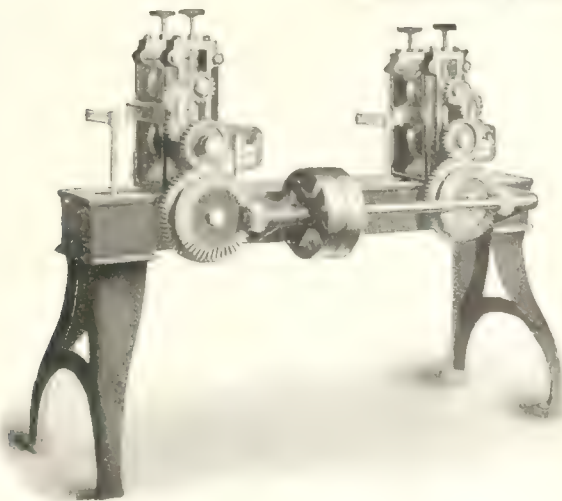
INQUIRIES SOLICITED.

*Mention The India Rubber World when you write.*

## NEW ENGLAND BUTT COMPANY,

PROVIDENCE, RHODE ISLAND.

MANUFACTURERS OF MACHINERY.



TWO HEAD RUBBER COVERING MACHINE.

Rubber Strip Covering Machines  
For Covering Electrical Wires.

Strip Cutters and Rubber  
Spreading Machines.

Braiders for Covering Rubber Hose.

Complete Line of Machinery for Insu-  
lating Electrical Wires and Cables.

**FINE CASTINGS A SPECIALTY.**

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ESTABLISHED 1848.

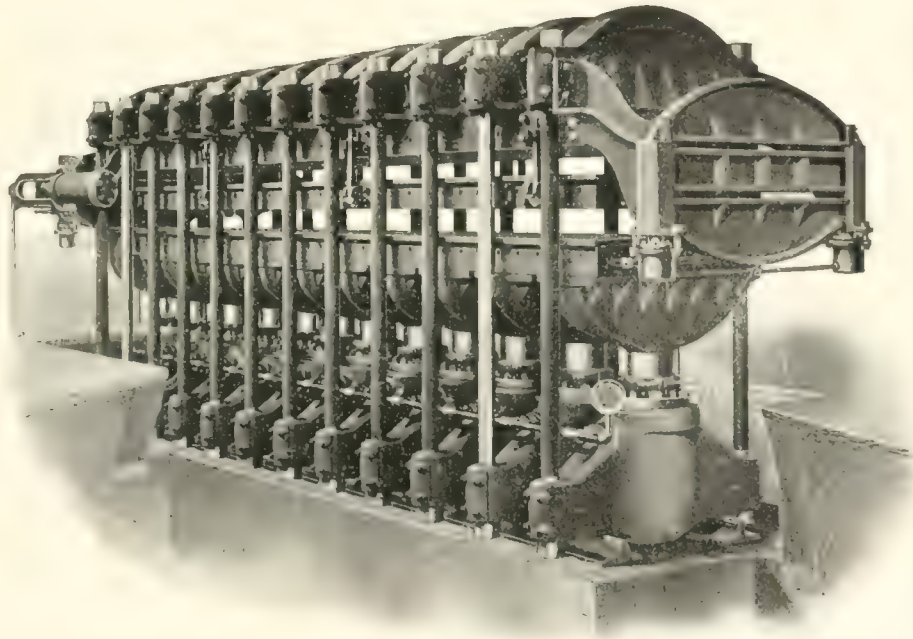
# Farrel Foundry and Machine Co.,

Largest Manufacturers in the World of \_\_\_\_\_

# Rubber Machinery.

FRANKLIN FARREL, PRES.  
CHARLES F. BLISS, TREAS.  
FRANK E. HOADLEY, SEC.

ANSONIA, CONN., U. S. A.



STANDARD THREE-PLATEN BELT PRESS.  
BUILT WITH ANY SIZE AND NUMBER OF PLATENS

CALENDERS, GRINDERS, MIXERS, CRACKERS, WASHERS,  
WARMERS and REFINERS.

HYDRAULIC BELT PRESSES, with Hydraulic Stretchers,  
MULTIPLE, HEEL and SCREW PRESSES, PUMPS,  
ACCUMULATORS and FITTINGS.

---

LINOLEUM MACHINERY—Calenders, Grinders, Mixers, etc.  
Cabling, Winding, Spooling and Measuring Machines for Insulated Wire.  
Chilled Iron and Sand Rolls of all sizes, Steel and Wrought Iron Rolls.  
Shafting, Machine Moulded Gearing, Friction Clutches, etc.



ESTABLISHED 1836.

INCORPORATED 1850.

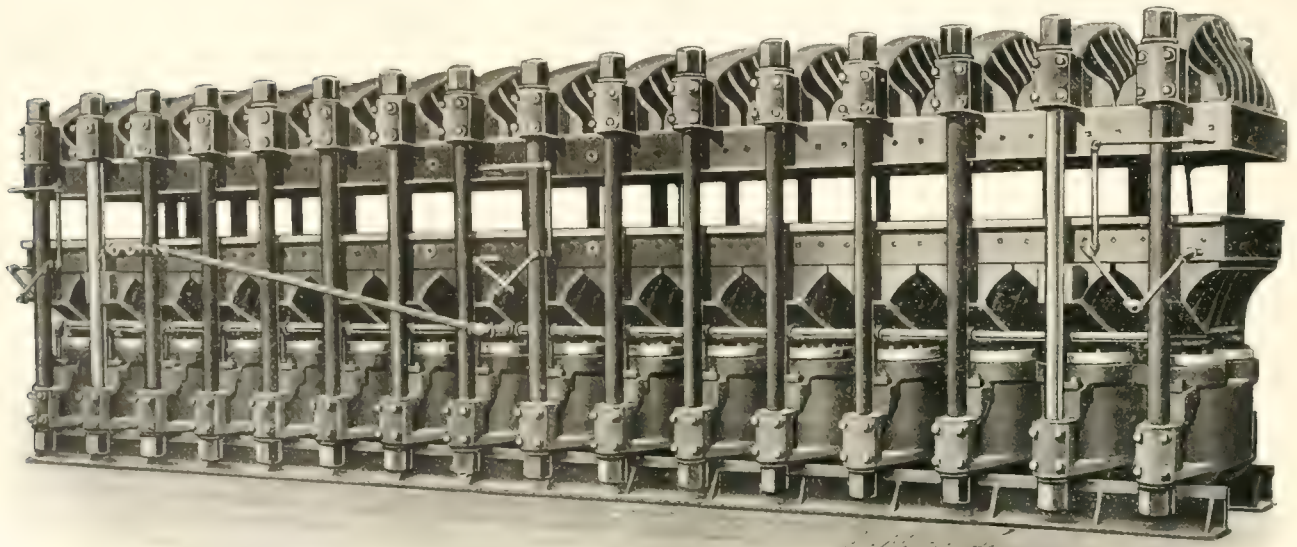
# BIRMINGHAM IRON FOUNDRY,

DERBY, CONN., U. S. A.

Oldest and Largest Makers of

RUBBER MILL MACHINERY

in the United States.



52'' X 30'' 6'' HYDRAULIC PRESS,  
WITH 32 9'' RAMS.

## RUBBER MILL MACHINERY.

- MILLS** Two and Three Roll Washers—Grinders, Warmers and Mixers, all sizes up to 26"x84"—Sheeters and Refiners—Crackers with Chilled Cut Rolls—Experimental mill for laboratory use, etc., etc.
- CALENDERS** Two, Three and Four Roll Calenders—Pearce Patent Six Roll Double Friction Calender—Soling and Upper Calenders with Engraved Rolls—Embossing Calenders for Carriage Cloth—Double Sheet Calenders—Special Calenders of all kinds.
- PRESSES** Hydraulic Presses for Belting—Clark's Patent Hydraulic Belt Stretchers—Screw Presses of all kinds—Multiple Hydraulic Presses for Mould Work—Accumulators and Pumps.
- POWER TRANSMISSION** Shafting; Pattern, Machine Moulded and Cut Gearing; Self-Oiling and Standard Pillow Blocks; Friction Clutches, etc.
- SPECIAL MACHINERY** Complete Rubber Reclaiming Plants—Belt Making Machines—Bias Cutting Machines—Automatic Jar Ring Lathes—Roller Bearing Heater Cars—Transfer Cars—Turn Tables—Cloth Dryers—Duck Slitters—Cording Machines—Band Cutting Machines—Spreaders—Varnishing Machines—Doubling Drums—Complete Hose Making Plants, etc.

*Mention The India Rubber World when you write.*

# DRYERS AND WATER SEPARATORS

—FOR—

## RECLAIMED RUBBER

AUTOMATIC AND ECONOMICAL  
PRODUCES HIGHER GRADE MATERIAL  
AT LOWER COST AND MORE EFFICIENT.

Installed in the  
Largest Reclaiming Plants in the World.

## AMERICAN PROCESS CO.,

62-64 WILLIAM STREET,  
NEW YORK CITY.

*Mention The India Rubber World when you write.*

## Embossing Calenders

For Artificial Leather, Table Oil Cloth,  
and Carriage Covers.

## Drying Machines

with Copper Cylinders for Cotton Duck,  
Drills and Sheeting.

## THE TEXTILE-FINISHING MACHINERY CO.,

PROVIDENCE R. I.

Southern Agent, STUART W. CRAMER,

Trust Bldg., Charlotte, N. C. Equitable Bldg., Atlanta, Ga.

*Mention The India Rubber World when you write.*

## HOLMES BROS.

MAKERS OF

## RUBBER MOLDS

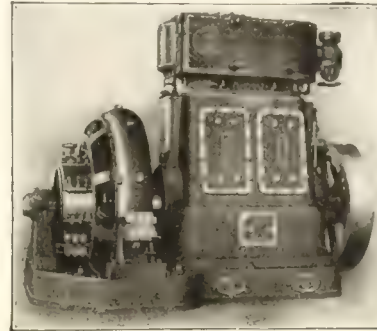
And Special Machinery for Rubber Factories  
Mandrels, Cutting Gauges, Lathe Knives, Hand and Foot  
Presses, Calender Attachments, Stock Cutting Machines,  
Tubing Machine Dies and Pins, Trimming Dies, Hand  
Stitchers and Rollers, Experimental Mills, Etc. . . .

73-75 WEST JACKSON BOULEVARD  
CHICAGO, ILL.

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## For ISOLATED LIGHTING PLANTS

the Sturtevant Generating Sets are especially adapted because of their high efficiency and compact construction. These distinctive features of the type here shown were developed under the rigid specifications of the U. S. Navy Department. These sets are built in a line of five sizes ranging from 17½ to 100 K. W., good for 320 to 1820 sixteen candle power lamps respectively at normal load.



A 100 K. W. generating set can be located in a space measuring less than 6 feet wide, 9½ feet long and 8 feet high, will operate at a combined efficiency of over 86 per cent. and will consume not exceeding 31 pounds of water per K. W. hour

## B. F. STURTEVANT CO.

Boston, Mass.

General Office and Works, Hyde Park, Mass.

New York

Philadelphia

Chicago

London

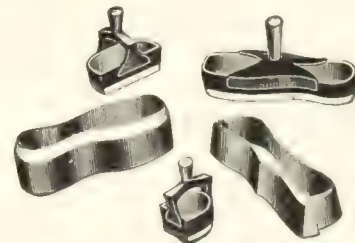
Designers and Builders of Heating, Ventilating, Drying and Mechanical Draft Apparatus; Fans, Blowers and Exhausters; Steam Engines Electric Motors and Generating Sets; Fuel Economizers; Forges, Exhaust Heads, Steam Traps, etc.

450

*Mention the India Rubber World when you write.*

## Calender Roll Engraving.

MOLDS,  
Cutting Dies,  
Label Dies  
and Plates.



Hand Rollers,  
and  
Stitchers,  
Sheet Rubber  
Spring Gauge,  
Etc., Etc.

## THE HOGGSON & PETTIS MFG. CO.,

NEW HAVEN, CONN., U. S. A.

*Mention The India Rubber World when you write.*

## STEAM PRESS

FOR

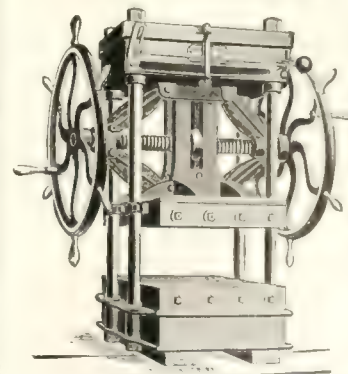
Mechanical Goods.

HYDRAULIC

OR

KNUCKLE JOINT.

Write for Prices.



Boomer & Boschert Press Co.,  
336 West Water St.,

SYRACUSE, N. Y.

*Mention The India Rubber World when you write.*



BOSTON.

CHICAGO.

PHILADELPHIA.

# J. H. LANE & CO.,

110 WORTH ST., NEW YORK.

HOSE  
BELT  
SAIL  
WIDE

DUCKS

PAPER FELTS  
OUNCE GOODS  
ARMY DUCK  
OSNABURGS

**AUTOMOBILE  
AND BICYCLE**

**TIRE FABRICS**

SHEETINGS AND DRILLS.  
AND FABRICS IN REGULAR AND SPECIAL CONSTRUCTION.

SEA ISLAND, EGYPTIAN, AND PEELER YARNS,  
AND FABRICS IN REGULAR AND SPECIAL CONSTRUCTION.

*Mention The India Rubber World when you write.*

## Vacuum Drying Apparatus

FOR

Sheet and Reclaimed Rubber

EMIL PASSBURG SYSTEM

The Passburg (Patent) "VACUUM DRYING  
APPARATUS" is no experiment.

They are installed in all of the principal rubber  
manufactories of Europe.

200 chambers in daily operation drying rubber  
and rubber compounds.

Particulars upon application.

**JOSEPH P. DEVINE,**

314 Mooney-Brisbane Bldg.

BUFFALO, N. Y.

SOLE MANUFACTURING RIGHTS FOR AMERICA

Handwork is costly  
and inaccurate.

Anything that the hands can do  
can be done by Machinery.

No Problem is too Difficult for us.

Do you want a Machine for any  
Purpose in Rubber Work?

Write to us and we will Produce it

**WELLMAN SOLE CUTTING MACHINE CO.,**  
MEDFORD, MASSACHUSETTS.

A. M. STICKNEY, President.

EDWARD BROOKS, Treasurer.

*Mention The India Rubber World when you write.*

## L. J. WING MANUFACTURING CO.

136 LIBERTY ST., NEW YORK.

Manufacturers of

Wing's Disc Fans, Exhausters, Blowers,

Heaters, Electric Motors, High Speed

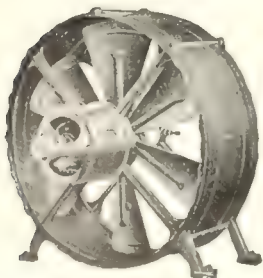
Engines, Marine and Stationary

Gas Engines, Acetylene

Generators, etc.

SEND FOR CATALOGUES AND REFERENCE LIST.

*Mention The India Rubber World when you write.*



THE **MASON**

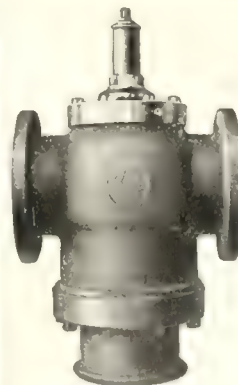
**Reducing Valves**

ARE THE WORLD'S STANDARD VALVES.

For automatically reducing and absolutely  
maintaining an even steam or air pressure.

*They are adapted for every need and guaranteed  
to work perfectly in every instance.*

WRITE FOR FULL INFORMATION AND  
SPLENDID REFERENCES.



**THE MASON REGULATOR CO. Boston,  
Mass., U.S.A.**

# Publishers' Page **INDIA RUBBER WORLD**

OFFICES:

No. 150 NASSAU ST., NEW YORK

## When To Send In Advertising "Copy."

OUR advertisers would confer a great favor upon the Publisher if, in sending in "copy" for changes, they would endeavor to do so as long as possible in advance of the date of publication—which is the last day of the month. We do not desire to fix any arbitrary rule as to the latest date in the month on which advertising copy will be received, for reasons may develop, just before the printing of the paper, to make a change of advertisement desirable. At the same time it will add to the convenience of the business office if those who intend sending in advertising "copy" will consider, not the latest date on which it can be handled, but the earliest date on which it can be furnished. Time should be allowed for sending proofs to the advertiser.

## "Up to Date."

TO THE INDIA RUBBER WORLD—*Gentlemen*: Enclosed please find Postoffice order value 12s. 6d. in payment of your account against us, up to June, 1905. We look with considerable interest to the up to date articles in your publication. We are yours faithfully,

THE COLONIAL RUBBER CO.,  
Sydney, New South Wales, June 1, 1905. A. S. HADGSON.

## The Lord Help Us.

A BANK with international connections requests the opinion of THE INDIA RUBBER WORLD with regard to the advisability of one of its clients investing in bonds of the Amazonas (Brazil) loan of 1902.

One of the largest banks in New York has a client in New England who is disposed to invest "millions" in Fenton's Artificial Rubber—an English invention which was first exploited in 1899, but has not yet set the world on fire.

Every mail brings to THE INDIA RUBBER WORLD letters regarding the value of the securities of This, That, or the Other rubber plantation company as an investment proposition.

Where would THE INDIA RUBBER WORLD stand if it should advise favorably in regard to all these investments—and they should not result so favorably to the investors?

## Three Copies For One House.

ONE of the oldest and largest rubber manufacturing companies in England wrote under date of July 21:

"We are desirous of taking another copy of THE INDIA RUBBER WORLD, commencing with the next issue, the subscription to run concurrently with that of the two copies we are now getting, in order that the three subscriptions may run out at the same time. Please let us know your price for this, and we will remit the amount in due course. The copy to be addressed to Mr. ———."

## A Helpful Government Bureau.

THE work of the Bureau of Manufactures of the Department of Commerce and Labor at Washington was commended in the last INDIA RUBBER WORLD (see page 363) in connection with the valuable publication entitled *Daily Consular and Trade Reports*, designed to inform American manufacturers and exporters in regard to business conditions abroad and opportunities for the extension of business by American firms. The disposition of the director of this Bureau to render it of the utmost utility to those for whose benefit it is maintained is further evidenced by a circular which is being sent to manufacturers generally, inviting their cooperation in the establishment, in the Washington office, of an authentic and up to date directory of American manufacturers, in a shape which will enable the Bureau promptly to answer requests for information in regard to American products for export, of whatever nature. The basis of this system will be a comprehensive card index, in which will be recorded in regard to each firm the information which the circular asks for. It is intimated that the same information will be utilized in the creation of a

similar card index system in the principal consulates of the United States, in case the necessary authority is granted by Congress. It may be mentioned that already a number of consuls have of their own accord begun keeping a list of American products and details regarding them, for the convenience of possible buyers in their respective districts, the value of which has already been fully demonstrated. Manufacturers and others desiring further information regarding this new movement can obtain it from John M. Carson, Esq., chief of the Bureau of Manufactures, at Washington.

## Results From A Small Advertisement.

A CERTAIN Brooklyn manufacturer who is a subscriber to THE INDIA RUBBER WORLD states: "I saw the advertisement of ——— some two years ago and since that time have been using his goods to the extent of \$1500 a year." The advertisement to which reference was made is a 1/4 page card, costing \$50 a year. This in a good tip which might be digested with profit by the skeptical.

THE Colombo Times of Ceylon reports the sale locally, about July 1, of 350 pounds of good Ceylon plantation rubber, from the Kalutara district, at 5 15 rupees [= \$1.67] per pound, which constitutes a record in the Colombo market.

## Contributed To The Success Of The Business.

A RUBBER manufacturer writes:

"THE INDIA RUBBER WORLD has contributed largely to the success of the rubber business at large, and has brought about the closer feeling between the various manufacturers, which intimacy can be still further increased, and we believe to do so would be better for the entire business."

## The Tropical Agriculturist.

PUBLISHED MONTHLY BY

A. M. &amp; J. FERGUSON, COLOMBO, CEYLON.

ALL about Tea, Coffee, Cacao, Tobacco, Cardamoms, Cotton, Cinchona, Sugar, Liberian Coffee, India-rubber, Cinnamon, Cassia, Cocoanuts, Palms and other Palm Trees, Aloes and other Fibre Plants, Rice, Fruit Trees, Vegetables, Citronella and other Grasses yielding Essential Oils, Gum, and other Tropical Products.

Rates of Subscription for America, including Postage.

YEARLY, \$5 50. IN ADVANCE, \$5 00.

HALF YEARLY, \$3 00. " " " \$2 60.

The whole sixteen volumes published can be had for \$88.

## The Ceylon Observer

CIRCULATES throughout the island of Ceylon, and in Southern India. Its Overland Edition circulates extensively in Great Britain and Ireland. Annual subscription, \$15 00. Ceylon Observer (Weekly), \$8 00. The Advertising Rates are moderate. Special quotations given for Trade Announcements, appearing for a series of insertions.

Maps of Ceylon and Estates, Ceylon Directory, Planting Manuals, etc. Cheques should be drawn in favor of the MANAGER, Ceylon Observer.

Mention The India Rubber World when you write.

## WANTED.

A RESPONSIBLE rubber manufacturing company anywhere in the civilized world to appreciate and make a superior automobile tire fabric for general use under American and foreign patents. Address BRAINS, care of THE INDIA RUBBER WORLD. [835]

## RUBBER LAND.

5000 acres of the finest land in Mexico. This property was purchased some years ago before the boom in Mexican lands began. It was selected after an inspection of hundreds of properties. It is therefore the very cream of the rubber belt and unsurpassed both in soil and location. It fronts on a navigable river and is only a few miles from the railroad. Will be sold at a very reasonable price, and, to responsible persons, on very reasonable terms. This is a chance for a man with some means to make a fortune from a plantation company. Address R. M., care of "The India Rubber World." [828]



Is your plant driven most economically?

Interesting and valuable reading in

## "ELECTRIC POWER IN FACTORIES"

SENT FOR THE ASKING.

STANLEY-G. I.  
ELECTRIC MFG. CO.  
PITTSFIELD, MASS.

*Mention The India Rubber World when you write.*

**LE CAOUTCHOUC & LA GUTTA-PERCHA**  
49, Rue des Vinaigriers, 49,  
PARIS (10e), FRANCE.

The only Journal in the French language dealing with India-rubber and Gutta-percha and the industries connected therewith, including Asbestos, Celluloid, and Insulating Materials.

Published on the 15th of each month.

ANNUAL SUBSCRIPTION: 26 FRANCS.

An unexcelled advertising medium for firms wishing to introduce their products into France and the French colonies.

 Specimen copies free. Tariff of advertisements on demand.

*Mention The India Rubber World when you write.*

Bound Yearly Volumes of  
**The India Rubber World**  
For Sale at This Office  
PRICE \$5 EACH, PREPAID.

**ALL KINDS OF SCRAP RUBBER**  
METALS AND RAGS.

Main Office: NEWARK, N. J.

**SAN GIACOMO SONS.**

Warehouses: ORANGE, N. J.

**LASTS** FOR RUBBER SHOES **LAST**  
DESIGNING  
A  
SPECIALTY  
MIDDLESEX LAST CO., Boston, Mass., U. S. A.

**PIRELLI & CO.,**  
MILAN, (Italy).

General India Rubber, Guttapercha  
and Asbestos Manufacturers.

ELECTRIC WIRES AND CABLES.

Works in MILAN — SPEZIA & VILLANUEVA Y GELTRÚ, (Spain).

Export: Agencies in all leading Countries.

GRAND PRIX, PARIS, 1900.

Grand Prize and 2 Gold Medals, St. Louis, 1904.

*Mention The India Rubber World when you write.*

'Phone 1124 Broad.

**F. R. MÜLLER & CO.,**  
Merchants.

**INDIA-RUBBER AND GUTTA-PERCHA**

186 Devonshire Street,  
Boston.

108 Water Street,  
New York.

GLASGOW.

LONDON.

LIVERPOOL.

*Mention The India Rubber World when you write.*

**RUBBER**  
and other Tropical Seeds and Plants.

**Hevea Brasiliensis** (Pará rubber) seeds supplied from August to October every year; booking necessary before the end of July to avoid disappointments. Stumps of both kinds shipped all the year round.

**Castilloa Elastica** seeds from June to October delivery.

**Manihot Glaziovii** (Ceará rubber) seeds supplied always. *Ficus elastica*, *Landolphia Kirkii*, *Pionium latifolia*, *Urceola esculenta*, and other Rubber seeds and plants available several times in the year.

Tea of different sorts, Hybrid Coffee, Nutmeg, Fibers, Shade and Timber trees; Fruits, etc.—Seeds, Plants and Grafts supplied. Six different descriptive Price Lists, with special offers of *Hevea* and *Castilloa* seeds and stumps, on view at the office of THE INDIA RUBBER WORLD, or post free on application to

**J. P. WILLIAM & BROTHERS,**

Tropical Seed Merchants, HENERATGODA, CEYLON.

TELEGRAPHIC ADDRESS: WILLIAM, HENERATGODA, CEYLON.

**PHILIP BROOMFIELD & CO.,**  
307-311 ATLANTIC AVE., BOSTON, MASS.

Largest Dealers in Scrap Rubber of Every Description and the Best Packers of Rubber Boots and Shoes in America.

*Mention The India Rubber World when you write.*

# Small Advertisement Department.

## SITUATIONS WANTED.

A MAN 34, qualified by 14 years' experience as Superintendent, Manager, and in general practical direction is open to engagement. Experience covers all classes of Mechanical Goods, Sundries, and Tires. Would prefer connection with small factory having sufficient capital for development. Manager or Superintendent of department in large factory, or branch house would be acceptable. Address N. A. C., care of THE INDIA RUBBER WORLD. [831]

PRACTICAL SUPERINTENDENT.—Position wanted as Superintendent with reliable firm in the Mechanical line, where honest effort and a disposition to hustle and attain best results will be appreciated; 20 years' experience in all branches. Address EXECUTIVE, care of THE INDIA RUBBER WORLD. [790]

POSITION wanted by a practical man as Assistant Superintendent or Foreman of Calender Room. Will furnish compounds and make own shoddy; 20 years' experience. Address M. R. C., care of THE INDIA RUBBER WORLD. [836]

SALESMAN.—A thorough Mechanical Rubber Salesman wants to sell direct from mill to some of best consumers trade in Philadelphia and near by, and hard coal regions; goods must be high grade. Want to connect quick as season is almost on. Reputation good. Address S. M. L., care of THE INDIA RUBBER WORLD. [820]

SALESMAN.—Wanted position as Salesman by a man thoroughly understanding the Mechanical Rubber line; 20 years' experience. Address SALESMAN, care of THE INDIA RUBBER WORLD. [832]

SUPERINTENDENT.—Wanted position as Superintendent by one who is thoroughly practical and able to produce results; has made specialty of compounding, am familiar with all modern methods in the manufacturing of Mechanical Rubber Goods. Address S. U. B., care of THE INDIA RUBBER WORLD. [830]

WANTED.—A position as Assistant Superintendent or Manager in manufacturing or wholesale house making full line of Druggist and Mechanical Rubber Goods. Have had several years experience in the compounding and making of all kinds of Druggist and Molded Goods, and am familiar with the work in all branches; also have the formulae for all classes of work. Address C. R. J., care of THE INDIA RUBBER WORLD. [834]

## SITUATIONS OPEN.

CALENDER MEN.—Wanted two Calender Men, must be reliable, steady, and thoroughly understand work. Mill within 100 miles of New York City. In replying state age, mill worked in, and wages wanted. Address P. I. A., care of THE INDIA RUBBER WORLD. [825]

MANAGER or SECRETARY.—A good all round business man, having extensive experience in substitutes, crude rubbers, gutta perchas, and similar gums, thoroughly posted on all methods of financing purchases, and very expert on qualities, desires employment on salary and commission or its equivalent. The advertiser has knowledge that must insure greater financial success to any concern, such as a way to keep goods containing Pontianak tough for years, a dry method of keeping goods soft, etc. Address ENERGETIC, care of THE INDIA RUBBER WORLD. [827]

SALESMAN wanted to visit the rubber trade, including the drug trade, to handle a good selling article as a side line. Address SPECIALTIES, care of THE INDIA RUBBER WORLD. [824]

SALESMAN wanted by a large Rubber Manufacturer to sell Mechanical Goods. Good opening for capable man. Give age, experience, references, salary wanted. Address R. A. R., care of THE INDIA RUBBER WORLD. [820]

## FOR SALE.

FOR SALE.—Factory Rubber Waste from Rubber Cement; cleaned at a low price; sample sent free. UNITED STATES WASTE RUBBER CO., No. 487 North Warren Avenue, Brockton, Mass.

**GRINDERS.** Two 15" X 36" chilled roll Birmingham Mills; two 14" X 40" chilled roll Birmingham Mills; one 5" X 11" Vulcanizer or Devulcanizer, hinged door and bolts, tested 150. W. C. COLEMAN CO., Rochelle Park, New Jersey.

## FOR SALE.

FOR SALE.—First-class Cement Churns or Mixers at half value. Address JOSEPH WHITNEY, 48 North Front St., Philadelphia, Pa. [788]

FOR SALE.—Ten shares, par value \$500, of stock Isthmus Rubber Company of Ubero; paid 7 per cent. four years ago, and has paid 8 per cent. each year since that time. Must sacrifice for quick cash. What offers? H. STAFFORD, No. 309 Broadway, New York. [833]

## BUSINESS OPPORTUNITY.

A GERMAN HOUSE established for more than ten years in the sale of American Rubber Footwear, and now holding the agency of the United States Rubber Co., is open to accept the Representation of American manufacturers of Rubber Novelties, such as may be carried in connection with the goods now handled. Address EKERT BROTHERS, bei den Muhren 48, Hamburg, Germany. [781]

WELL known Liverpool and reputable firm of India-rubber Merchants and Importers are open to buy on commission for good American and otherwise act as required, etc. Address LIVERPOOL, care of THE INDIA RUBBER WORLD. [813]

## FOR RENT.

FOUR Floors, 50 x 70 feet, in a nearly new brick factory building. Equipped with line shafting on each floor; Automatic Sprinklers throughout the building; Houser freight elevator; light, heat, and power furnished. For particulars write WILLIAM YERDON, Fort Plain, New York. [798]

## CONSULTING SUPERINTENDENT.

SUPERINTENDENT who has had nearly 20 years' experience in the Mechanical and Reclaiming business will act as Consulting Superintendent. If you want recipes of any kind, or want to match other makes of goods, want to reduce the cost of the goods you are now making, or are having trouble with any of your stocks, write me confidentially. Address B. C. O., care of THE INDIA RUBBER WORLD. [749]

## RUBBER MILL MACHINERY FOR SALE. PRACTICALLY NEW.

THREE Stock and Friction Calenders, size of rolls 18" X 48"; condition as good as new. They can be seen standing and working.==Two Friction Calenders, 20" X 48" and 20" X 36"; practically new; can be seen working.==Fifteen Mills, in the best of condition, as good as new, size of rolls 15" X 36".==Five Crackers and Washers, of different sizes.==Four Mills, 12" X 36".==One Devulcanizer for reclaiming.==Three large cars, stand 125 pounds steam pressure; size of Devulcanizer, 6 feet diameter by 25 feet long.==Three large "Buffalo Forge Company" Fans that have been in use six months. Size of one Fan 10 feet diameter by 5 feet; chain gear drive with chain belt. The other two Fans are 5 feet diameter by 3 feet with upright engine drive. Those Fans are new.==One Hydraulic Press 30" X 30" platens, five openings, 9" ram, practically new.==A large lot of all sizes of Pumps.==Two Upper and Soling Calenders, size of main rolls, 12" X 30"; two shifting front rolls, 10" X 30", practically new. One Soling Calender, four rolls set upright, size of rolls 10" X 22".==Three Up-to-date Burrstone Mills, iron frames on stands, complete with shafting and pulley, size of stone, 3½ feet in diameter.==One Centrifugal Woll Washer.==New bedplate, frames, clutch and boxes of a 60" Mill.==Three 20" X 22", one opening, Heel Presses.==One new 27 HP. Ball Engine. One large Wright Engine as good as new and ready to work.==Small Engine 24" X 19".==One 6 HP. Harris Corliss Engine which can be seen setting up at the factory of the National India Rubber Co., Bristol, R. I. It has never been connected.==A large lot of all kinds of Rubber Mill Machinery.==Just bought about 500 tons of other rubber mill machinery that is not listed here. All of this machinery I want to dispose of quickly for cash. PHILIP McGRORY, Trenton, New Jersey.

HERBERT S. KIMBALL,  
MILL ARCHITECT and ENGINEER,  
RUBBER FACTORY ENGINEERING.  
101 TREMONT STREET, BOSTON, MASS.



# AMERICAN TOOL & MACHINE CO.

109 BEACH ST.

BOSTON MASS.

Double and Single End Spreaders,  
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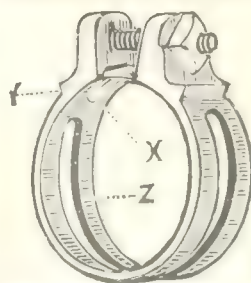
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# BUYERS' DIRECTORY OF THE RUBBER TRADE.

CLASSIFIED LIST OF MANUFACTURERS AND DEALERS IN INDIA-RUBBER GOODS AND RUBBER MANUFACTURERS' SUPPLIES.

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## MECHANICAL RUBBER GOODS

Belting.  
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Gaskets.  
Hose (Fire, Garden, Steam).  
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Mould Work.  
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Canadian Rubber Co. of Montreal.  
Chicago Rubber Wks., Chicago.  
Cleveland Rubber Co., Cleveland, O.  
Combination Rubber Mfg. Co., Bloomfield, N. J.  
Continental Caoutchouc & Guttapercha Co., Hanover, Germany.  
Empire Rubber Mfg. Co., Trenton, N. J.  
Eureka Fire Hose Co., New York.  
Eureka Rubber Mfg. Co. of Trenton.  
B. F. Goodrich Co., Akron, O.  
Gutta Percha & Rubber Mfg. Co., N. Y.  
Gutta Percha & Rubber Mfg. Co., Toronto.  
Home Rubber Co., Trenton, N. J.  
Lake Shore Rubber Co., Erie, Pa.  
Liverpool Rubber Co., Liverpool, Eng.  
Manhattan Rubber Mfg. Co., New York.  
Mechanical Rubber Co., New York.  
N. J. Car Spring & Rubber Co., Jersey City, N. J.  
New York Belting & Packing Co., N. Y.  
New York Rubber Co., New York.  
North British Rubber Co., Ltd., Edinburgh.  
Peerless Rubber Mfg. Co., New York.  
Pirelli & Co., Milan, Italy.  
Republic Rubber Co., Youngstown, Ohio.

## MECHANICAL GOODS.

Revere Rubber Co., Boston.  
Springfield Tire & Rubber Co., Springfield, Ohio.  
Jos. Stokes Rubber Co., Trenton, N. J.  
Trenton Rubber Mfg. Co., Trenton, N. J.  
Voorhees Rubber Mfg. Co., Jersey City

## Air Brake Hose.

Boston Belting Co., Boston-New York.  
Boston Woven Hose & Rubber Co.  
Canadian Rubber Co. of Montreal.  
Combination Rubber Mfg. Co., Bloomfield, N. J.  
Eureka Rubber Mfg. Co. of Trenton.  
B. F. Goodrich Co., Akron, O.  
Home Rubber Co., Trenton, N. J.  
N. J. Car Spring & Rubber Co., Jersey City.  
Peerless Rubber Mfg. Co., New York.  
Republic Rubber Co., Youngstown, Ohio.  
Revere Rubber Co., Boston-New York.  
Voorhees Rubber Mfg. Co., Jersey City

## Belting (Canvas).

Boston Woven Hose & Rubber Co.  
Canadian Rubber Co. of Montreal.  
Eureka Fire Hose Co., New York.  
Peerless Rubber Mfg. Co., New York.  
Revere Rubber Co., Boston-New York.

## Billiard Cushions.

Boston Belting Co., Boston.  
Canadian Rubber Co. of Montreal.  
Combination Rubber Mfg. Co., Bloomfield, N. J.  
B. F. Goodrich Co., Akron, O.  
Manhattan Rubber Mfg. Co., New York.  
New York Belting & Packing Co., Ltd.  
New York Rubber Co., New York.  
Revere Rubber Co., Boston-New York.

## Blankets—Printers'.

Boston Belting Co., Boston.  
Canadian Rubber Co. of Montreal.  
Hodgman Rubber Co., New York.  
Liverpool Rubber Co., Liverpool, Eng.  
N. J. Car Spring & Rubber Co., Jersey City, N. J.

## MECHANICAL GOODS.

Blankets—Printers'.—Continued.  
Revere Rubber Co., Boston-New York.  
Voorhees Rubber Mfg. Co., Jersey City

## Brushes.

C. J. Balley & Co., Boston.

## Buffers.

Boston Belting Co., Boston-New York.  
Canadian Rubber Co. of Montreal.  
Liverpool Rubber Co., Ltd., Liverpool

## "Bull Dog" Packing.

Boston Woven Hose & Rubber Co.

## Card Cloths.

Canadian Rubber Co. of Montreal.  
Mechanical Fabric Co., Providence, R. I.

## Carriage Mats.

Boston Belting Co., Boston-New York.  
Boston Woven Hose & Rubber Co.  
Canadian Rubber Co. of Montreal.  
B. F. Goodrich Co., Akron, O.  
Home Rubber Co., Trenton, N. J.  
N. J. Car Spring & Rubber Co., Jersey City, N. J.  
Peerless Rubber Mfg. Co., New York.  
Voorhees Rubber Mfg. Co., Jersey City

## Cord (Pure Rubber).

Boston Belting Co., Boston-New York.  
Boston Woven Hose & Rubber Co.  
Cleveland Rubber Co., Cleveland, O.  
Davol Rubber Co., Providence, R. I.  
Empire Rubber Mfg. Co., Trenton, N. J.  
Home Rubber Co., Trenton, N. J.  
Manhattan Rubber Mfg. Co., New York.  
N. J. Car Spring & Rubber Co., Jersey City, N. J.  
New York Belting & Packing Co., N. Y.  
Peerless Rubber Mfg. Co., New York.  
Republic Rubber Co., Youngstown, O.  
Revere Rubber Co., Boston-New York.  
Voorhees Rubber Mfg. Co., Jersey City

## MECHANICAL GOODS.

## Deckle Straps.

Boston Belting Co., Boston.  
Liverpool Rubber Co., Liverpool, Eng.  
Mechanical Rubber Co., Chicago.  
New York Belting & Packing Co., N. Y.  
Republic Rubber Co., Youngstown, O.  
Revere Rubber Co., Boston-New York.

## "Dods" Packing.

Bowers Rubber Co., San Francisco, Cal.

## Door Springs.

Hodgman Rubber Co., New York.

## Dredging Sleeves.

Boston Belting Co., Boston-New York.  
Boston Woven Hose & Rubber Co.  
B. F. Goodrich Co., Akron, O.  
Home Rubber Co., Trenton, N. J.  
N. J. Car Spring & Rubber Co., Jersey City.  
Republic Rubber Co., Youngstown, O.

## Force Cups.

Hodgman Rubber Co., New York.

## "Forsyth" Combination Packing.

Boston Belting Co., Boston-New York.

## Fruit Jar Rings.

Boston Woven Hose & Rubber Co.  
Canadian Rubber Co. of Montreal.  
Cleveland Rubber Co., Cleveland, O.  
B. F. Goodrich Co., Akron, O.  
Empire Rubber Mfg. Co., Trenton, N. J.  
Eureka Rubber Mfg. Co. of Trenton.  
Manhattan Rubber Mfg. Co., New York.  
Republic Rubber Co., Youngstown, Ohio.  
New York Belting & Packing Co., N. Y.

## Fuller Balls.

B. F. Goodrich Co., Akron, O.  
N. J. Car Spring & Rubber Co., Jersey City.



## RUBBER BUYERS' DIRECTORY—CONTINUED.

## MECHANICAL GOODS.

## Fuller Balls—Continued.

Peerless Rubber Mfg. Co., New York.  
Republic Rubber Co., Youngstown, O.

## Gage Glass Washers.

Boston Belting Co., Boston, Mass.  
Canadian Rubber Co. of Montreal.  
Cleveland Rubber Co., Cleveland, O.  
Empire Rubber Mfg. Co., Trenton, N. J.  
Home Rubber Co., Trenton, N. J.  
Liverpool Rubber Co., Liverpool, Eng.  
Manhattan Rubber Mfg. Co., New York.  
Mechanical Rubber Co., Chicago, Ill.  
N. J. Car Spring & Rubber Co., Jersey City, N. J.  
New York Belting & Packing Co., N. Y.  
New York Rubber Co., New York.  
Revere Rubber Co., Boston, Mass.  
Jos. Stokes Rubber Co., Trenton, N. J.  
Voorhees Rubber Mfg. Co., Jersey City, N. J.

## Gas-Bags (Rubber).

Canadian Rubber Co. of Montreal.  
Cleveland Rubber Co., Cleveland, O.  
Daval Rubber Co., Providence, R. I.  
B. F. Goodrich Co., Akron, O.  
Liverpool Rubber Co., Liverpool, Eng.  
N. J. Car Spring & Rubber Co., Jersey City, N. J.  
Peerless Rubber Mfg. Co., New York.  
Tyer Rubber Co., Andover, Mass.  
Voorhees Rubber Mfg. Co., Jersey City.

## Gasket Tubing.

Canadian Rubber Co. of Montreal.  
Jenkins Bros., New York.

## Hat Bags.

Boston Belting Co., Boston.  
Canadian Rubber Co. of Montreal.  
Home Rubber Co., Trenton, N. J.  
Manhattan Rubber Mfg. Co., New York.  
Mechanical Rubber Co., Chicago.  
N. J. Car Spring & Rubber Co., Jersey City, N. J.  
New York Belting & Packing Co., N. Y.  
New York Rubber Co., New York.  
Peerless Rubber Mfg. Co., New York.  
Republic Rubber Co., Youngstown, O.  
Revere Rubber Co., Boston.

## Horse Shoe Pads.

Canadian Rubber Co. of Montreal.  
Home Rubber Co., Trenton, N. J.  
Peerless Rubber Mfg. Co., New York.  
Plymouth Rubber Co., Stoughton, Mass.  
Revere Rubber Co., Boston-New York.  
Voorhees Rubber Mfg. Co., Jersey City.

## Hose—Armored.

## Hose—Wire Wound.

Boston Belting Co., Boston-New York.  
Boston Woven Hose & Rubber Co.  
Canadian Rubber Co. of Montreal.  
B. F. Goodrich Co., Akron, O.  
N. J. Car Spring & Rubber Co., Jersey City.  
Peerless Rubber Mfg. Co., New York.  
Republic Rubber Co., Youngstown, O.  
Revere Rubber Co., Boston-New York.  
Voorhees Rubber Mfg. Co., Jersey City.

## Hose Couplings and Fittings.

Boston Woven Hose & Rubber Co.  
Canadian Rubber Co. of Montreal.

## Hose Linings.

Boston Belting Co., Boston-New York.  
Boston Woven Hose & Rubber Co.  
Empire Rubber Mfg. Co., Trenton, N. J.  
Eureka Rubber Mfg. Co., Trenton, N. J.  
N. J. Car Spring & Rubber Co., Jersey City, N. J.  
Peerless Rubber Mfg. Co., New York.

## Hose—Protected.

Boston Belting Co., Boston-New York.  
Revere Rubber Co., Boston-New York.  
Voorhees Rubber Mfg. Co., Jersey City.

## Hose Racks and Reels.

Wirt & Knox Mfg. Co., Philadelphia.

## Hose—Rubber Lined.

## COTTON AND LINEN.

Boston Belting Co., Boston-New York.  
Boston Woven Hose & Rubber Co.

## MECHANICAL GOODS.

## Hose—Rubber Lined.—Continued.

## COTTON AND LINEN.

Canadian Rubber Co. of Montreal.  
Cleveland Rubber Co., Cleveland, O.  
Empire Rubber Mfg. Co., Trenton, N. J.  
Eureka Fire Hose Co., New York.  
Eureka Rubber Mfg. Co. of Trenton.  
B. F. Goodrich Co., Akron, O.  
Gutta Percha & Rubber Mfg. Co., N. Y.  
Gutta Percha and Rubber Mfg. Co. of Toronto.  
Home Rubber Co., Trenton, N. J.  
Manhattan Rubber Mfg. Co., New York.  
N. J. Car Spring & Rubber Co., Jersey City, N. J.  
New York Belting & Packing Co., N. Y.  
Peerless Rubber Mfg. Co., New York.  
Republic Rubber Co., Youngstown, O.  
Revere Rubber Co., Boston.  
Jos. Stokes Rubber Co., Trenton, N. J.  
Voorhees Rubber Mfg. Co., Jersey City.

## Hose—Submarine.

Boston Belting Co., Boston-New York.  
B. F. Goodrich Co., Akron, O.  
Republic Rubber Co., Youngstown, O.

## "Jenkins '96" Packing.

Jenkins Bros., New York.

## Lawn Sprinklers.

Boston Woven Hose & Rubber Co.  
Canadian Rubber Co. of Montreal.

## Mallets (Rubber).

Boston Belting Co., Boston-New York.  
B. F. Goodrich Co., Akron, O.  
Peerless Rubber Mfg. Co., New York.  
Revere Rubber Co., Boston-New York.

## Mould Work.

## [See Mechanical Rubber Goods.]

Davidson Rubber Co., Boston.  
Daval Rubber Co., Providence, R. I.  
Faultless Rubber Co., Akron, O.  
Hardman Rubber Co., Belleville, N. J.  
Hodgman Rubber Co., New York.  
La Crosse (Wis.) Rubber Mills Co.  
Mattson Rubber Co., New York.  
Mitzel Rubber Co., Akron, O.  
National India Rubber Co., Bristol, R. I.  
Plymouth Rubber Co., Stoughton, Mass.  
Tyer Rubber Co., Andover, Mass.

## "Nubian" Packing.

Voorhees Rubber Mfg. Co., Jersey City.

## Oil Well Supplies.

Boston Belting Co., Boston-New York.  
Boston Woven Hose & Rubber Co.  
B. F. Goodrich Co., Akron, O.  
Home Rubber Co., Trenton, N. J.  
Lake Shore Rubber Co., Erie, Pa.  
N. J. Car Spring & Rubber Co., Jersey City.  
Peerless Rubber Mfg. Co., New York.  
Republic Rubber Co., Youngstown, O.  
Revere Rubber Co., Boston-Pittsburgh.  
Voorhees Rubber Mfg. Co., Jersey City.

## Paper Machine Rollers.

Boston Belting Co., Boston-New York.  
B. F. Goodrich Co., Akron, O.  
Republic Rubber Co., Youngstown, O.  
Revere Rubber Co., Boston-New York.  
Peerless Rubber Mfg. Co., New York.  
Voorhees Rubber Mfg. Co., Jersey City.

## "Perfection" Belting.

Boston Woven Hose & Rubber Co.

## Plumbers' Supplies.

Canadian Rubber Co. of Montreal.  
B. F. Goodrich Co., Akron, O.  
Republic Rubber Co., Youngstown, O.

## Pump Valves.

## [See Mechanical Rubber Goods.]

Jenkins Bros., New York.

## "Rainbow" Packing.

Peerless Rubber Mfg. Co., New York.

## MECHANICAL GOODS.

## Rollers—Rubber Covered.

Boston Belting Co., Boston.  
Canadian Rubber Co. of Montreal.  
Cleveland Rubber Co., Cleveland, O.  
Empire Rubber Mfg. Co., Trenton, N. J.  
Eureka Rubber Mfg. Co. of Trenton.  
B. F. Goodrich Co., Akron, O.  
Home Rubber Co., Trenton, N. J.  
Manhattan Rubber Mfg. Co., New York.  
Mechanical Rubber Co., Chicago.  
N. J. Car Spring & Rubber Co., Jersey City, N. J.  
New York Belting & Packing Co., N. Y.  
Peerless Rubber Mfg. Co., New York.  
Plymouth Rubber Co., Stoughton, Mass.  
Republic Rubber Co., Youngstown, O.  
Revere Rubber Co., Boston-New York.

## Sewing Machine Rubbers.

B. F. Goodrich Co., Akron, O.

## Springs—Rubber.

Boston Belting Co., Boston-New York.  
Canadian Rubber Co. of Montreal.  
B. F. Goodrich Co., Akron, O.  
Hardman Rubber Co., Belleville, N. J.  
Liverpool Rubber Co., Liverpool, Eng.  
N. J. Car Spring & Rubber Co., Jersey City.  
Peerless Rubber Mfg. Co., New York.  
Plymouth Rubber Co., Stoughton, Mass.  
Republic Rubber Co., Youngstown, Ohio.  
Revere Rubber Co., Boston-New York.  
Voorhees Rubber Mfg. Co., Jersey City.

## Stair Treads.

Boston Belting Co., Boston-New York.  
Boston Woven Hose & Rubber Co.  
Canadian Rubber Co. of Montreal.  
Cleveland Rubber Co., Cleveland, O.  
Empire Rubber Mfg. Co., Trenton, N. J.  
Home Rubber Co., Trenton, N. J.  
Liverpool Rubber Co., Liverpool, Eng.  
Manhattan Rubber Mfg. Co., New York.  
N. J. Car Spring & Rubber Co., Jersey City, N. J.  
New York Belting & Packing Co., N. Y.  
New York Rubber Co., New York.  
Peerless Rubber Mfg. Co., New York.  
Republic Rubber Co., Youngstown, O.  
Revere Rubber Co., Boston-New York.  
Voorhees Rubber Mfg. Co., Jersey City.

## Thread.

Mechanical Fabric Co., Providence, R. I.  
Revere Rubber Co., Boston.

## Tiling.

Canadian Rubber Co. of Montreal, Ltd.  
B. F. Goodrich Co., Akron, O.  
Gutta Percha & Rubber Mfg. Co., N. Y.  
N. J. Car Spring & Rubber Co., Jersey City.  
New York Belting & Packing Co., N. Y.  
Peerless Rubber Mfg. Co., New York.  
Republic Rubber Co., Youngstown, Ohio.  
Voorhees Rubber Mfg. Co., Jersey City.

## Tires.

## AUTOMOBILE, BICYCLE, AND CARRIAGE.

Canadian Rubber Co. of Montreal, Ltd.  
Continental Caoutchouc & Guttapercha Co., Hanover.  
Empire Rubber Mfg. Co., Trenton, N. J.  
B. F. Goodrich Co., Akron, O.  
Gutta Percha & Rubber Mfg. Co., Toronto.  
Kokomo Rubber Co., Kokomo, Ind.  
Lake Shore Rubber Co., Erie, Pa.  
Liverpool Rubber Co., Liverpool, Eng.  
North British Rubber Co., Ltd., Edinburgh.  
Plymouth Rubber Co., Stoughton, Mass.  
Republic Rubber Co., Youngstown, O.

## AUTOMOBILE AND CARRIAGE.

Boston Belting Co., Boston-New York.  
Eureka Rubber Mfg. Co., Trenton, N. J.  
Michelin Tire American Agency, N. Y.  
Revere Rubber Co., Boston-New York.  
Springfield Tire & Rubber Co., Springfield, Ohio.

## Truck Bands.

Boston Belting Co., Boston.  
Cleveland Rubber Co., Cleveland, O.

## MECHANICAL GOODS.

## Truck Bands—Continued.

Empire Rubber Mfg. Co., Trenton, N. J.  
B. F. Goodrich Co., Akron, O.  
Home Rubber Co., Trenton, N. J.  
Manhattan Rubber Mfg. Co., New York.  
Mechanical Rubber Co., Chicago.  
N. J. Car Spring & Rubber Co., Jersey City, N. J.  
New York Belting & Packing Co., N. Y.  
Peerless Rubber Mfg. Co., New York.  
Republic Rubber Co., Youngstown, O.  
Voorhees Rubber Mfg. Co., Jersey City.

## Tubing.

## [See Mechanical Rubber Goods.]

American Hard Rubber Co., New York.  
Davidson Rubber Co., Boston.  
Daval Rubber Co., Providence, R. I.  
Hardman Rubber Co., Belleville, N. J.  
Plymouth Rubber Co., Stoughton, Mass.  
Tyer Rubber Co., Andover, Mass.

## "Usudurian" Packing.

Revere Rubber Co., Boston-New York.

## Valve Balls.

Boston Belting Co., Boston.  
Cleveland Rubber Co., Cleveland, O.  
Manhattan Rubber Mfg. Co., New York.  
Mechanical Rubber Co., Chicago.  
New York Belting & Packing Co., N. Y.  
New York Rubber Co., New York.  
Peerless Rubber Mfg. Co., New York.  
Republic Rubber Co., Youngstown, O.

## Valve Discs.

American Hard Rubber Co., New York.  
Boston Belting Co., Boston-New York.  
B. F. Goodrich Co., Akron, O.  
Peerless Rubber Mfg. Co., New York.  
Republic Rubber Co., Youngstown, O.  
Revere Rubber Co., Boston-New York.

## Valves.

## [See Mechanical Rubber Goods.]

Jenkins Bros., New York-Chicago.  
Plymouth Rubber Co., Stoughton, Mass.

## Wringer Rolls.

Canadian Rubber Co. of Montreal.  
Cleveland Rubber Co., Cleveland, O.  
B. F. Goodrich Co., Akron, O.  
Home Rubber Co., Trenton, N. J.  
Republic Rubber Co., Youngstown, O.

## DRUGGISTS' AND STATIONERS' SUNDRIES

## Atomizers.

## Bandages.

## Bulbs.

## Syringes.

## Water Bottles.

## Druggists' Sundries—General.

American Hard Rubber Co., New York.  
C. J. Bailey & Co., Boston.  
Boston Woven Hose & Rubber Co.  
Canadian Rubber Co. of Montreal.  
Cleveland Rubber Co., Cleveland, O.  
Davidson Rubber Co., Boston.  
Daval Rubber Co., Providence, R. I.  
Faultless Rubber Co., Akron, O.  
B. F. Goodrich Co., Akron, O.  
Hardman Rubber Co., Belleville, N. J.  
Hodgman Rubber Co., New York.  
Mitzel Rubber Co., Akron, O.  
North British Rubber Co., Ltd., Edinburgh.  
Pirelli & Co., Milan, Italy.  
Seamless Rubber Co., New Haven, Ct.  
Tyer Rubber Co., Andover, Mass.

## Balls, Dolls and Toys.

Canadian Rubber Co. of Montreal.  
Continental Caoutchouc & Guttapercha Co.  
B. F. Goodrich Co., Akron, O.  
New York Rubber Co., New York.



## RUBBER BUYERS' DIRECTORY—CONTINUED.

## DRUGGISTS' SUNDRIES

## Combs.

American Hard Rubber Co., New York

## Elastic Bands.

Canadian Rubber Co. of Montreal.  
Davidson Rubber Co., Boston.  
Daval Rubber Co., Providence, R. I.  
B. F. Goodrich Co., Akron, O.  
Hodgman Rubber Co., New York-Boston  
Tyler Rubber Co., Andover, Mass.

## Erasive Rubbers.

Davidson Rubber Co., Boston.  
B. F. Goodrich Co., Akron, O.  
Hardman Rubber Co., Belleville, N. J.  
Mattson Rubber Co., New York.

## Finger Cots.

Faultless Rubber Mfg. Co., Akron, O.  
B. F. Goodrich Co., Akron, O.  
Pure Gum Specialty Co., Barberton, O.

## Gloves.

Canadian Rubber Co. of Montreal.  
Daval Rubber Co., Providence, R. I.  
Faultless Rubber Co., Akron, O.  
B. F. Goodrich Co., Akron, O.  
Pure Gum Specialty Co., Barberton, O.

## Hard Rubber Goods.

American Hard Rubber Co., New York.  
Canadian Rubber Co. of Montreal.  
Daval Rubber Co., Providence, R. I.  
Hardman Rubber Co., Belleville, N. J.  
Stokes Rubber Co., Joseph, Trenton, N. J.  
Tyler Rubber Co., Andover, Mass.

## Hospital Sheetings.

Cleveland Rubber Co., Cleveland, O.  
Davidson Rubber Co., Boston.  
Daval Rubber Co., Providence, R. I.  
Hodgman Rubber Co., New York.  
Plymouth Rubber Co., Stoughton, Mass.  
Tyler Rubber Co., Andover, Mass.

## Hot Water Bottles.

[See Water Bottles.]

## Ice Bags and Ice Caps.

Faultless Rubber Co., Akron, Ohio.  
B. F. Goodrich Co., Akron, O.  
Hardman Rubber Co., Belleville, N. J.  
Pure Gum Specialty Co., Barberton, O.  
Tyler Rubber Co., Andover, Mass.

## Life Preservers.

Hodgman Rubber Co., New York.

## Nipples.

Canadian Rubber Co. of Montreal.  
Cleveland Rubber Co., Cleveland, O.  
Davidson Rubber Co., Boston.  
Daval Rubber Co., Providence, R. I.  
Faultless Rubber Co., Akron, O.  
B. F. Goodrich Co., Akron, O.  
Pure Gum Specialty Co., Barberton, O.  
Tyler Rubber Co., Andover, Mass.

## Sponges (Rubber).

Faultless Rubber Co., Ashland, Ohio.  
B. F. Goodrich Co., Akron, O.

## Stationers' Sundries.

American Hard Rubber Co., New York.  
Boston Woven Hose & Rubber Co.  
Canadian Rubber Co. of Montreal.  
Cleveland Rubber Co., Cleveland, O.  
Davidson Rubber Co., Boston.  
Daval Rubber Co., Providence, R. I.  
B. F. Goodrich Co., Akron, O.  
Hardman Rubber Co., Belleville, N. J.  
Hodgman Rubber Co., New York-Boston.  
Seamless Rubber Co., New Haven, Ct.  
Tyler Rubber Co., Andover, Mass.

## Stopples (Rubber).

Cleveland Rubber Co., Cleveland, O.  
Daval Rubber Co., Providence, R. I.  
Hodgman Rubber Co., New York.  
Manhattan Rubber Mfg. Co., New York.  
New York Belting & Packing Co., N. Y.  
Tyler Rubber Co., Andover, Mass.

## DRUGGISTS' SUNDRIES.

## Throat Bags.

Cleveland Rubber Co., Cleveland, O.  
Daval Rubber Co., Providence, R. I.  
B. F. Goodrich Co., Akron, O.  
Tyler Rubber Co., Andover, Mass.

## Tobacco Pouches.

Canadian Rubber Co. of Montreal.  
Faultless Rubber Co., Akron, Ohio.  
B. F. Goodrich Co., Akron, O.  
Pure Gum Specialty Co., Barberton, O.  
Tyler Rubber Co., Andover, Mass.

MACKINTOSHED  
AND SURFACE  
GOODS

## Air Goods (Rubber).

Canadian Rubber Co. of Montreal.  
Cleveland Rubber Co., Cleveland, O.  
Daval Rubber Co., Providence, R. I.  
B. F. Goodrich Co., Akron, O.  
Hodgman Rubber Co., New York.  
New York Rubber Co., New York.  
National India Rubber Co., Providence.  
Tyler Rubber Co., Andover, Mass.

## Air Mattresses.

Canadian Rubber Co. of Montreal.  
Mechanical Fabric Co., Providence, R. I.

## Barbers' Bibs.

Daval Rubber Co., Providence, R. I.  
Tyler Rubber Co., Andover, Mass.

## Bathing Caps.

Daval Rubber Co., Providence, R. I.  
B. F. Goodrich Co., Akron, O.

## Bellows Cloths.

Boston Rubber Co., Boston.  
Cleveland Rubber Co., Cleveland, O.  
Hodgman Rubber Co., New York.  
La Crosse (Wis.) Rubber Mills Co.

## Calendering.

La Crosse (Wis.) Rubber Mills Co.  
Plymouth Rubber Co., Stoughton, Mass.

## Carriage Ducks and Drills.

Cleveland Rubber Co., Cleveland, O.  
Empire Rubber Mfg. Co., Trenton, N. J.  
Kureka Rubber Mfg. Co. of Trenton.  
Gutta Percha & Rubber Mfg. Co., Toronto.

## Clothing.

Canadian Rubber Co. of Montreal.  
Cleveland Rubber Co., Cleveland, O.  
Granby Rubber Co., Granby, Quebec.  
Gutta Percha & Rubber Mfg. Co. of Toronto.  
Hodgman Rubber Co., New York.  
La Crosse (Wis.) Rubber Mills Co.  
North British Rubber Co., Ltd., Edinburgh.  
Pirelli & Co., Milan, Italy.

## Cravenette.

Cravenette Co., Ltd.

## Diving Dresses.

Hodgman Rubber Co., New York.

## Dress Shields.

Hodgman Rubber Co., New York.  
Mattson Rubber Co., New York.

## Horse Covers.

Hodgman Rubber Co., New York.

## Leggings.

Cleveland Rubber Co., Cleveland, O.  
Hodgman Rubber Co., New York.

## Mackintoshes.

[See Clothing.]

## Proofing.

Canadian Rubber Co. of Montreal.  
La Crosse (Wis.) Rubber Mills Co.  
Plymouth Rubber Co., Stoughton, Mass.

## MACKINTOSHED GOODS.

## Rain Coats.

Cravenette Co., Ltd.

## Rubber Coated Cloths.

Mechanical Fabric Co., Providence, R. I.

RUBBER  
FOOTWEAR

## Boots and Shoes.

American Rubber Co., Boston.  
Boston Rubber Shoe Co., Boston.  
Canadian Rubber Co. of Montreal.  
L. Candee & Co., New Haven, Ct.  
Granby Rubber Co., Granby, Quebec.  
Gutta Percha & Rubber Mfg. Co. of Toronto.  
Hood Rubber Co., Boston.  
Liverpool Rubber Co., Liverpool, Eng.  
Lycoming Rubber Co., Williamsport, Pa.  
Meyer Rubber Co., New York.  
National India Rubber Co., Boston.  
North British Rubber Co., Ltd., Edinburgh.  
United States Rubber Co., New York.  
Wales-Goodyear Rubber Co., Boston.  
Woonsocket Rubber Co., Providence.

## Heels and Soles.

Boston Woven Hose & Rubber Co.  
Canadian Rubber Co. of Montreal.  
Continental Caoutchouc & Gutta-percha Co., Hanover.  
Plymouth Rubber Co., Stoughton, Mass.  
Springfield Tire & Rubber Co., Springfield, Ohio.

## Tennis Shoes.

American Rubber Co., Boston.  
Boston Rubber Shoe Co., Boston.  
Granby Rubber Co., Granby, Quebec.  
Liverpool Rubber Co., Liverpool, Eng.  
National India Rubber Co., Providence.  
United States Rubber Co., New York.

## Tennis Soles.

Canadian Rubber Co. of Montreal.  
Jos. Stokes Rubber Co., Trenton, N. J.

## Wading Pants.

Canadian Rubber Co. of Montreal.  
Hodgman Rubber Co., New York.

SPORTING  
GOODS

## Foot Balls.

Canadian Rubber Co. of Montreal.  
Cleveland Rubber Co., Cleveland, O.  
Faultless Rubber Co., Akron, Ohio.  
B. F. Goodrich Co., Akron, O.  
Hodgman Rubber Co., New York.

## Golf Balls.

Boston Belting Co., Boston.  
Canadian Rubber Co. of Montreal.  
Davidson Rubber Co., Boston.  
B. F. Goodrich Co., Akron, O.

## Submarine Outfits.

Hodgman Rubber Co., New York.

## Sporting Goods.

Canadian Rubber Co. of Montreal.  
Faultless Rubber Co., Akron, Ohio.  
B. F. Goodrich Co., Akron, O.  
Hodgman Rubber Co., New York.  
Tyler Rubber Co., Andover, Mass.

## Striking Bags.

Canadian Rubber Co. of Montreal.  
Faultless Rubber Co., Akron, Ohio.  
B. F. Goodrich Co., Akron, O.  
Pure Gum Specialty Co., Barberton, O.

DENTAL AND  
STAMP RUBBER

## Dental Gum.

American Hard Rubber Co., New York.  
Cleveland Rubber Co., Cleveland, O.  
Tyler Rubber Co., Andover, Mass.

## DENTAL AND STAMP RUBBER

## Rubber Dam.

Cleveland Rubber Co., Cleveland, O.  
Daval Rubber Co., Providence, R. I.  
Hodgman Rubber Co., New York.  
Tyler Rubber Co., Andover, Mass.

## Stamp Gum.

Mattson Rubber Co., New York.  
Mechanical Rubber Co., Chicago, Ill.  
N. J. Car Spring & Rubber Co., Jersey City, N. J.  
New York Belting & Packing Co., N. Y.

## ELECTRICAL

## Electrical Supplies.

American Hard Rubber Co., New York.  
Lake Shore Rubber Co., Erie, Pa.  
Joseph Stokes Rubber Co., Trenton, N. J.  
Massachusetts Chemical Co., Boston.  
Tyler Rubber Co., Andover, Mass.

## Friction Tape.

Boston Belting Co., Boston.  
Boston Woven Hose & Rubber Co.  
Canadian Rubber Co. of Montreal.  
Cleveland Rubber Co., Cleveland, O.  
B. F. Goodrich Rubber Co., Akron, O.  
Massachusetts Chemical Co., Boston.  
Mechanical Rubber Co., Chicago.  
Home Rubber Co., Trenton, N. J.  
Revere Rubber Co., Boston-New York.

## Hard Rubber Goods.

American Hard Rubber Co., New York.  
Canadian Rubber Co. of Montreal.  
Joseph Stokes Rubber Co., Trenton, N. J.

## Insulating Compounds.

Canadian Rubber Co. of Montreal.  
Gutta-Percha & Rubber Mfg. Co., Toronto.  
Massachusetts Chemical Co., Boston.

## Insulated Wire and Cables.

National India Rubber Co., Providence.

## Splicing Compound.

Home Rubber Co., Trenton, N. J.

## MISCELLANEOUS

## Architect and Engineer.

Herbert S. Kimball, Boston.

## Cement (Rubber).

Boston Belting Co., Boston.  
Canadian Rubber Co. of Montreal.  
B. F. Goodrich Co., Akron, O.  
Manhattan Rubber Mfg. Co., New York.  
N. J. Car Spring & Rubber Co., Jersey City, N. J.  
New York Belting & Packing Co., N. Y.

## Chemical Analyses.

Durand Woodman, Ph D., New York.  
H. L. Terry, Manchester, England.

## Chemists.

Stephen P. Sharples, Boston, Mass.  
Durand Woodman, Ph. D., New York.

## Electric Apparatus.

Stanley-G. I. Electric Mfg. Co., Pittsfield, Mass.

## Laboratory—Tests, Analyses.

G. E. Heyl-Dia, New York.

## Rubber Lands For Sale.

O. H. Harrison, San Francisco.

## Rubber Planting.

Hidalgo Plantation and Commercial Co., San Francisco.  
Mexican Mutual Rubber Co., Chicago.

## Rubber Tree Seeds.

J. P. William &amp; Bros., Heneratgoda, Ceylon.



## MACHINERY AND SUPPLIES FOR RUBBER MILLS.

RUBBER  
MACHINERY

## Acid Tanks.

Birmingham Iron Foundry, Derby, Ct.

## Band Cutting Machine.

A. Adamson, Akron, O.

Birmingham Iron Foundry, Derby, Ct.

## Belt Folding Machines.

Birmingham Iron Foundry, Derby, Ct.

Farrel Foundry &amp; Mach. Co., Ansonia, Ct.

## Belt Slitters.

Birmingham Iron Foundry, Derby, Ct.

Farrel Foundry &amp; Mach. Co., Ansonia, Ct.

## Belt Stretchers.

Birmingham Iron Foundry, Derby, Ct.

Farrel Foundry &amp; Mach. Co., Ansonia, Ct.

Hoggson &amp; Pettis Mfg. Co., New Haven

## Blowers.

B. F. Sturtevant Co., Boston

L. J. Wang Mfg. Co., New York

## Boilers.

William R. Thropp, Trenton, N. J.

## Braidiers.

New England Butt Co., Providence, R. I.

## Buckles.

The Weld Mfg. Co., Boston

## Cabling Machinery.

Aiton Machine Co., New York.

## Calenders.

Birmingham Iron Foundry, Derby, Ct.

Farrel Foundry &amp; Mach. Co., Ansonia, Ct.

Textile-Finishing Machinery Co., Providence, R. I.

## Castings.

A. Adamson, Akron, O.

Birmingham Iron Foundry, Derby, Ct.

Farrel Foundry &amp; Mach. Co., Ansonia, Ct.

## Chucks (Lathe).

Hoggson &amp; Pettis Mfg. Co., New Haven

## Churns.

American Tool &amp; Machine Co., Boston.

## Cloth Dryers.

Birmingham Iron Foundry, Derby, Ct.

Farrel Foundry &amp; Mach. Co., Ansonia, Ct.

## Clutches.

Farrel Foundry &amp; Mach. Co., Ansonia, Ct.

## Crackers.

Birmingham Iron Foundry, Derby, Ct.

## Devulcanizers.

Birmingham Iron Foundry, Derby, Ct.

Edred W. Clark, Hartford, Ct.

William R. Thropp, Trenton, N. J.

## Dies.

Hoggson &amp; Pettis Mfg. Co., New Haven.

Holmes Bros., Chicago, Ill.

## Doubling Machines.

American Tool &amp; Machine Co., Boston.

## Drying Apparatus.

American Process Co., New York.

B. F. Sturtevant Co., Boston.

## Drying Machines.

Aiton Machine Co., New York.

Joseph P. Devine, Buffalo, N. Y.

Birmingham Iron Foundry, Derby, Ct.

Textile-Finishing Machinery Co., Providence, R. I.

## Dynamometers.

B. F. Sturtevant Co., Boston.

## Embossing Calenders.

Textile-Finishing Machinery Co., Providence, R. I.

## Engines.

B. F. Sturtevant Co., Boston.

William R. Thropp, Trenton, N. J.

L. J. Wang Mfg. Co., New York.

## Engraving Roll.

Hoggson &amp; Pettis Mfg. Co., New Haven

## Exhaust Fans and Heads.

B. F. Sturtevant Co., Boston.

## Factory Construction.

Herbert S. Kimball, Boston.

## Fans (Electric).

B. F. Sturtevant Co., Boston.

## Fans (Exhaust and Ventilating).

B. F. Sturtevant Co., Boston.

## Forges.

B. F. Sturtevant Co., Boston.

## Fuel Economizers.

B. F. Sturtevant Co., Boston.

## Gas Exhausters.

B. F. Sturtevant Co., Boston.

## Gearing.

Birmingham Iron Foundry, Derby, Ct.

Farrel Foundry &amp; Mach. Co., Ansonia, Ct.

## RUBBER MACHINERY.

## Generating Sets.

B. F. Sturtevant Co., Boston.

## Grinders.

Birmingham Iron Foundry, Derby, Ct.

Farrel Foundry &amp; Mach. Co., Ansonia, Ct.

William R. Thropp, Trenton, N. J.

## Hangers.

Farrel Foundry &amp; Mach. Co., Ansonia, Ct.

## Heating Apparatus.

B. F. Sturtevant Co., Boston.

## Hose Covering Machines.

New England Butt Co., Providence, R. I.

## Hose Making Machines.

Birmingham Iron Foundry, Derby, Ct.

## Hose Wrapping Machines.

A. Adamson, Akron, Ohio.

Birmingham Iron Foundry, Derby, Ct.

Farrel Foundry &amp; Mach. Co., Ansonia, Ct.

## Hydraulic Accumulators.

Birmingham Iron Foundry, Derby, Ct.

Farrel Foundry &amp; Mach. Co., Ansonia, Ct.

## Hydraulic Machinery.

Aiton Machine Co., New York.

## Insulating Machinery.

Aiton Machine Co., New York.

## Iron Castings.

Aiton Machine Co., New York.

## Lasts (Rubber Shoe).

Middlesex Last Co., Boston

## Lathes—Hard Rubber.

A. Adamson, Akron, Ohio.

## Lathes—Jar Ring.

A. Adamson, Akron, Ohio.

Birmingham Iron Foundry, Derby, Ct.

William R. Thropp, Trenton, N. J.

## Machinists' Tools.

Hoggson &amp; Pettis Mfg. Co., New Haven.

## Mechanical Draft.

B. F. Sturtevant Co., Boston.

## Mixers.

Birmingham Iron Foundry, Derby, Ct.

Farrel Foundry &amp; Mach. Co., Ansonia, Ct.

William R. Thropp, Trenton, N. J.

## Motors (Electric).

B. F. Sturtevant Co., Boston

## Moulds.

A. Adamson, Akron, Ohio.

Birmingham Iron Foundry, Derby, Ct.

Hoggson &amp; Pettis Mfg. Co., New Haven.

Holmes Bros., Chicago, Ill.

## Pillow Blocks.

Farrel Foundry &amp; Mach. Co., Ansonia, Ct.

## Post Hangers.

Farrel Foundry &amp; Mach. Co., Ansonia, Ct.

## Presses (for Rubber Work).

A. Adamson, Akron, O.

Birmingham Iron Foundry, Derby, Ct.

Boomer &amp; Boschert Press Co., Syracuse, N. Y.

Edred W. Clark, Hartford, Ct.

Farrel Foundry &amp; Mach. Co., Ansonia, Ct.

William R. Thropp, Trenton, N. J.

## Pumps.

Birmingham Iron Foundry, Derby, Ct.

Boomer &amp; Boschert Press Co., Syracuse, N. Y.

Farrel Foundry &amp; Mach. Co., Ansonia, Ct.

## Racks for Boot and Shoe Cars.

Hoggson &amp; Pettis Mfg. Co., New Haven.

## Reducing Valves.

Mason Regulator Co., Boston.

## Rollers.

Birmingham Iron Foundry, Derby, Ct.

Farrel Foundry &amp; Mach. Co., Ansonia, Ct.

## Rollers (Hand).

Hoggson &amp; Pettis Mfg. Co., New Haven.

Holmes Bros., Chicago, Ill.

## Rubber Covering Machines.

New England Butt Co., Providence, R. I.

## Rubber Machinery.

Aiton Machine Co., New York.

## Separators.

Turner, Vaughn &amp; Taylor Co., Cuyahoga Falls, Ohio.

## Separators for Reclaimed Rubber.

American Process Co., New York.

## Shafting.

Birmingham Iron Foundry, Derby, Ct.

Farrel Foundry &amp; Mach. Co., Ansonia, Ct.

## Special Rubber Machinery.

Wellman Sole Cutting Machine Co., Medford, Mass.

## Spreaders.

American Tool &amp; Machine Co., Boston.

Birmingham Iron Foundry, Derby, Ct.

New England Butt Co., Providence, R. I.

## RUBBER MACHINERY.

## Steam Traps and Specialties.

Jenkins Bros., New York.

Mason Regulator Co., Boston.

B. F. Sturtevant Co., Boston.

## Steel Stamps.

Hoggson &amp; Pettis Mfg. Co., New Haven.

## Stitchers (Hand).

Hoggson &amp; Pettis Mfg. Co., New Haven.

Holmes Bros., Chicago, Ill.

## Strip Covering Machines.

New England Butt Co., Providence, R. I.

## Strip Cutters.

New England Butt Co., Providence, R. I.

## Thermometers.

Hohmann &amp; Maurer Mfg. Co., Rochester, N. Y.

## Tubing Machines.

A. Adamson, Akron, O.

Edred W. Clark, Hartford, Ct.

Holmes Bros., Chicago, Ill.

John Royle &amp; Sons, Paterson, N. J.

## Vacuum Drying Chambers.

Joseph P. Devine, Buffalo, N. Y.

## Varnishing Machines.

Birmingham Iron Foundry, Derby, Ct.

## Ventilating Fans.

B. F. Sturtevant Co., Boston.

## Vulcanizers.

Birmingham Iron Foundry, Derby, Ct.

Farrel Foundry &amp; Mach. Co., Ansonia, Ct.

William R. Thropp, Trenton, N. J.

## Washers.

Birmingham Iron Foundry, Derby, Ct.

Farrel Foundry &amp; Mach. Co., Ansonia, Ct.

William R. Thropp, Trenton, N. J.

Turner, Vaughn &amp; Taylor Co., Cuyahoga Falls, Ohio.

## Wire Insulating Machines.

New England Butt Co., Providence, R. I.

## Wrapping Machines.

A. Adamson, Akron, O.

Birmingham Iron Foundry, Derby, Ct.

## Wire Rope Machinery.

Aiton Machine Co., New York.

SECOND-HAND  
MACHINERY.

W. C. Coleman Co., Rochelle Park, N. J.

Philip McGrory, Trenton, N. J.

FACTORY  
SUPPLIES

## Acid (Carbolic).

Barrett Mfg. Co., Philadelphia.

## Antimony, Sulphurets of.

## GOLDEN.

Actien-Ges. Georg Egestorff's Salzwerke, Linden, Germany.

Atlas Chemical Co., Newtonville, Mass.

## GOLDEN AND CRIMSON.

Joseph Cantor, New York.

Wm. H. Scheel, New York.

Stamford (Conn.) Rubber Supply Co.

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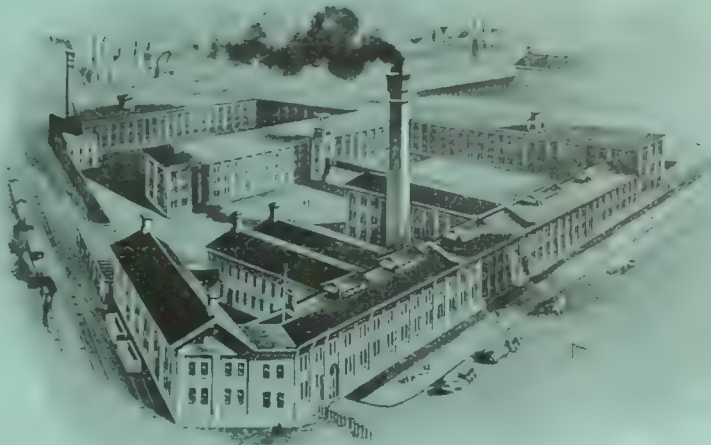
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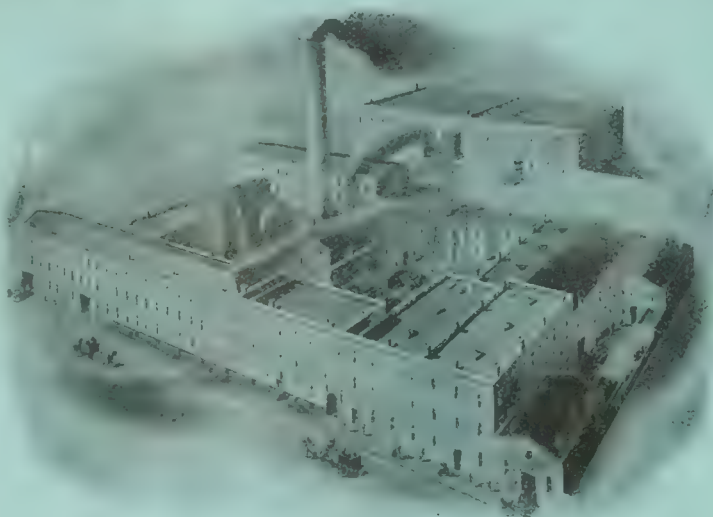


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